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EFFECT OF SOCIOECONOMIC SETTING AND ORGANIZATIONAL CLIMATE ON PROBLEMS BROUGHT TO ELEMENTARY SCHOOL OFFICES.

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THE EFFECTS AND RELATIONSHIPS OF THE SCHOOL LEARNING ENVIRONMENT WERE STUDIED. CASE STUDIES WERE MADE OF FOUR ELEMENTARY SCHOOLS IN CONTRASTING SOCIOECONOMIC SETTINGS. DIRECT OBSERVATION AND ORGANIZATIONAL QUESTIONNAIRES WERE EMPLOYED. DATA-GATHERING DEVICES OF MINIATURE VIDEO CAMERAS WERE INSTALLED IN THE SCHOOLS. A TOTAL OF 12,062 PROBLEMS WAS EXTRACTED AND CODED. THE EFFECTS OF ORGANIZATIONAL CLIMATE AND SOCIOECONOMIC SETTING WERE FOUND TO BE CLOSELY RELATED TO DIFFERENCES IN NUMBER, TYPES, AND INITIATORS OF PROBLEMS BROUGHT TO THE SCHOOL OFFICES. (RS)

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EFFECT OF SOCIOECONOMIC SETTING AND ORGANIZATIONAL CLIMATE ON PROBLEMS BROUGHT TO ELEMENTARY SCHOOL OFFICES, FINAL REPORT.

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Detroit, Michigan
1965

Final Report

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Lynn N. Nicholas
Helen E. Virjo
William W. Wattenberg

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CHAPTER I

INTRODUCTION

This research project was designed to investigate the effect of socioeconomic setting and organizational climate on problems brought to the elementary school office. The purpose of this descriptive study was threefold: (1) to help identify characteristics which determine the nature of the school learning environment; (2) to examine the kinds of challenges presented to the leadership abilities of principals in contrasting school situations; and (3) to pioneer in the use of new media in direct observation of principals-on-the-job in the school offices. The theoretical orientation of this study was derived from the Getzels-Guba model of administration[1] as a two-dimensional social process involving interaction between institutional and individual role expectations. By describing some of the effects of socioeconomic setting, indigenous aspects of the larger environment within which both the institution and individual operate and interact were researched. By distinguishing some of the effects of organizational climate, aspects of the transactional zone between the two dimensions were explored. Translation of the effects of these two genotypic variables into concrete terms, spelled out as observable differences in problems confronting the administrator, should help establish recognition of the close ties between theory and practice (provided, of course, that functional changes result from the findings).

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[1] Jacob W. Getzels, "Administration as a Social Process," Administrative Theory in Education, ed. Andrew W. Halpin (Chicago: Midwest Administration Center, 1958), pp. 150-65.

The plan called for deliberate coordination with three other ongoing environmental research projects: (1) the Detroit Great Cities School Improvement Program;[1] (2) the affiliated School-Community Research Study[2] of the University of Michigan; and (3) the Delinquency Control Training Center[3] of Wayne State University.

Value of the findings will be in implications derived for possible differentiation: in role expectations, selection, placement, pre-service and in-service education of principals, staff preparation in changing neighborhoods, and in new patterns of personnel allocation, in elementary schools.

Background of the Problem

Much publicity and great public concern have been focused on the growing complexity of problems in education confronting the large cities of America. Particular attention has been centered on violence in the schools, growth in the mass of unemployed out-of-school youth, increase in juvenile delinquency, exodus of tax-paying citizenry to the suburbs, and the series of crises created by rapidly changing neighborhoods. These troublesome situations in many of the large cities have been created by an accumulation of "social dynamite," primarily caused by: the results of automation, which accelerated the disappearance of unskilled jobs; in-migration and non-assimilation of various sub-cultures; and integration-segregation conflicts.

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[1] The Detroit Great Cities School Improvement Project (financed cooperatively by the Ford Foundation and the Detroit Public Schools), under the direction of Dr. Louis Monacel, is part of a nation-wide effort to improve educational programs in culturally disadvantaged areas of fourteen large cities.

[2] The School-Community Research Study, conducted in the Detroit Great Cities Project schools by Drs. Eugene Litwak and Henry Meyer of the School of Social Work of the University of Michigan, is under the auspices of the U.S. Office of Education as Project #1796.

[3] The Delinquency Control Training Center at Wayne State University, directed by Dr. William Wattenberg, is sponsored by a training grant from the Office of Juvenile Delinquency and Youth Development, Welfare Administration, U.S. Department of Health, Education and Welfare in cooperation with the President's Committee on Juvenile Delinquency and Youth Crime.

Caught in the cross-fire of maladjustments of a changing urban society, public schools frequently have become the locus of battle fought over complex social and economic issues. Schools have been subjected to critical scrutiny by individual parents and organized citizen groups. The demands for changes in curriculum, teaching methods, and school organization to meet the rapidly changing needs of society and the school clientele often have been extremely insistent and highly emotional. Tremendous pressures have been exerted on boards of education, superintendents, principals, and teachers by various forces to effect changes which often may be in direct conflict with each other.

The concern shown has been real, and often justified. Not least among the many factors causing such citizen unrest, has been the traditional rigidity and inadaptability of schools, which seemed to make their primary contribution to the growth of delinquency and drop-out rates by presenting a series of frustrating situations to some children. The dependence of wholesome personality development upon environmental factors (both material and human) has been recognized. However, a great need still exists for identification of determining factors in the school environment in which proneness to delinquency grows - - for examination of the conditions from which the delinquent child emerges.[1]

Recommendations of several recent studies[2] point out the importance of additional research into the functions, behavior, and influence of the school principal, as qualitative determinants in the learning environment. A newly developed instrument, "The Organizational Climate Description Questionnaire" (OCDQ), by Halpin and Croft,[3] makes it possible to measure certain important aspects of the organizational climate of a school (commonly attributed to the influence of the principal), which sets the tone of the atmosphere in the learning environment. By means of this instrument, six distinct climate profiles can be drawn, ranging on a continuum from "open" through "autonomous," "controlled," "familiar," and "paternal" to "closed."[4]

"Organizational climate," as measured by the OCDQ, was defined as the social interaction pattern between the principal and the staff - - the "organizational personality" of a school. The OCDQ describes a climate in terms of the perceptions of the staff regarding the school's adaptability to change; and the task-achievement and social-needs satisfactions obtained by the group. This concept of climate as an interaction pattern, follows the structural design of the Getzels-Guba theoretical model of administration as a social process - - with task-achievement and social-needs satisfactions being the analogues of the nomothetic and ideographic dimensions. The same two dimensions of climate were theoretically delineated by the earlier research into the dimensions of leadership behavior by Halpin, in which he postulated the concepts of "consideration" and "initiating structure."[1] The Getzels-Guba theory of administration is an anamorphic model of the theories of previous researchers who discovered the two-dimensional aspects of the process.[2]

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[1] David Wineman, "Existing and Projected Research on Individual and Group Approaches in the Treatment of Juvenile Delinquency," Role of the School in Prevention of Juvenile Delinquency, ed. William R. Carriker, a monograph report of a research symposium sponsored by the U.S. Office of Education and Phi Delta Kappa (Washington: U.S. Government Printing Office, 1963), p. 3.

[2] Such studies are cited and discussed in more detail in the following chapter on related research.

[3] Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools (Chicago: Midwest Administration Center, University of Chicago, 1963), pp. 30-31. (See Figure 8 in Appendix A.)

[4] See pp. 25-26 for detailed descriptions of the six climates.

In past research in educational administration, not enough attention has been directed to the isolation of elements in the various school situations and examination of their effects which make significantly different demands upon the leadership abilities of principals. The existence of differences in the types and sources of problems indigenous to schools located in contrasting socioeconomic settings has been recognized. However, the nature and extent of these differences have not been measured or described in concrete operational terms.

The lack of such evidence has led to the establishment of standard formulae in allocation of materials, services, and personnel in the large city school systems. Patterns of personnel staffing in elementary schools have tended to become standardized according to tradition. The pressures of various civil rights and professional organizations have tended to curtail the use of judgment by superintendents in fitting the person to the job. "Objective neutrality," generally, has been observed by filling vacancies in principalships with persons next on the eligibility lists. Within the confined limits of handling transfer requests, superintendents occasionally have been able to juggle positions to fulfill special requirements. However, even in such cases, often they have been subjected to accusations of showing favoritism and bias.

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[1] Andrew W. Halpin, "The Leadership Behavior and Leadership Ideology of Educational Administrators and Aircraft Commanders," Harvard Educational Review, XXV (Winter 1955), pp. 13-32.

[2] More detailed accounting is made in Chapter II of the theories of Chester Barnard, Cartwright and Zander, Hearn, Griffiths, and other researchers.

Many, often seriously damaging, consequences have resulted from school system policies and procedures which ignore probable crucial differences in situational demands. When staffing patterns, and the particular leadership abilities of the principal have been inappropriate to the situation, frequently conditions have been created which frustrated staff and pupils, and increased difficulties in the school community. The need for research to furnish more objective evidence concerning the possible existence of significant differences in school situations was apparent.

In order to provide maximum objectivity in the evidence collected, educational researchers have been searching for new and more refined data-gathering techniques. The feeling has been growing that such instruments as interviews, questionnaires, and inventories have been over-exploited, and their usefulness almost exhausted. Data acquired by such means have had the validity, reliability, and objectivity seriously questioned. Comprehensiveness has been limited also, generally because of the cautions exercised against over-imposition on respondents.[1] The investigators of this study decided to pioneer in the use of the latest electronic equipment available for educational research - - miniature transistorized video-cameras and recorders. To the best of their knowledge, such technical devices had not been used before in direct observation of administrators-at-work in their actual job situations.

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[1] Wendell Hough, "Final Report to the Research Committee for a Study in the Recruitment and Selection of Potential Leaders in Educational Administration." (Detroit: Wayne State University, 1960), pp. 8-10. (Hectographed.)

The issue of how to acquire the greatest yield of comprehensive and objective data by the most refined techniques available was solved by the following decisions:

1. The methodology would consist of an exhaustive study of four cases, representative of the population of schools that could be involved in the City of Detroit (a study composed of four schools).
2. The technique employed would be direct observation.
3. The data-gathering devices would be small transistorized video-cameras and recorders, remotely controlled.

Purpose of the Study

Consequently, this study was designed to probe in depth, by means of video-taping and coding, the effects of two genotypic variables (socio-economic setting and organizational climate) upon problems brought to four Detroit elementary school offices during a six-week period in March and April, 1964.

Significance of the Study

This study will have significance for other large cities of America insofar as their social and educational conditions simulate those of Detroit.

Hypotheses of the Study

The following hypotheses were established to be tested at a .02

level of significance:

I. The socioeconomic setting of a school, as identified by the School Housing Division of the Detroit Public Schools, and the Detroit Great Cities School Improvement Project[1] does not affect the:

   A. Number of problems brought to the school office.

   B. Types of problems brought to the school office.

   C. Types of initiators (pupils, parents, staff, etc.) that bring problems to the school office.

II. The organizational climate of the school, as measured by the "Organizational Climate Description Questionnaire,"[2] does not affect the:

   A. Number of problems brought to the school office.

   B. Types of problems brought to the school office.

   C. Types of initiators (pupils, parents, staff, etc.) that bring problems to the school office.

These hypotheses were examined by testing appropriate null hypotheses (e.g. $H_o:f_o = f_e$) by the χ^2 statistical technique.

Study Design

The study design called for the selection of four elementary schools with contrasting organizational climates, in contrasting socioeconomic settings, as the representative sample population:

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[1] The criteria used in determining socioeconomic setting placed primary emphasis on annual family income in the area. This was considered the best single measure since it tended to reflect both occupations and educational levels of the wage-earners.

[2] See Figure 8 in Appendix A, the "Organizational Climate Description Questionnaire."

I. Two schools with relatively "open"[1] organizational climates

  A. One in a "high" socioeconomic setting.

  B. One in a "low" socioeconomic setting.

II. Two schools with relatively "closed"[2] organizational climates

  A. One in a "high" socioeconomic setting.

  B. One in a "low" socioeconomic setting.

Data gathered by means of video-tape were to be viewed and coded as frequencies in classifications of types of problems and types of initiators. Adequacy of sampling was to be determined by the stabilization of odd and even day divisions of data from each school. Reliability norms were to be established by a second viewing and coding by different coders. Using the χ^2 statistical test, data were to be processed by computers to measure the significance of differences in the effects of the two variables. The region of rejection for the null hypotheses was established by setting the level of significance at: $\alpha = .02$.

Definitions of Terms

Clarification of certain terms used in this study is desirable at this point.

1. A "problem" was defined as any verbal interaction between two or more people on school related topics, occurring in the school office. (A "problem" was totally independent of evaluations based on considerations such as its seriousness, magnitude, or positive-negative valences.)

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[1] See p. 25 for a detailed description of an "open" organizational climate.

[2] See p. 26 for a description of a "closed" climate.

2. "Open" organizational climate of this study was defined as a mixed climate of "paternal-open" nature.[1] The "paternal" climate was characterized best as one in which the principal initiated most of the leadership acts himself. The leadership skills within the group were not used to the fullest potential. Therefore, less satisfaction was obtained in respect to either task achievement or social needs; hence esprit among members was not high. The "open" climate described an energetic, lively organization which was moving toward its goals, and which provided satisfaction for the group members' social needs. Leadership acts emerged easily and appropriately from both the group and the leader. Satisfaction in task achievement and social needs seemed to be obtained almost effortlessly. The main characteristic of this climate was the "authenticity" of the behavior that occurred among all the members.

3. A "closed" climate was characterized by various factors operating which made it more difficult for the staff and the principal to move effectively toward common goals. Stagnation and apathy may have been present, or the energetic efforts of the staff and the principal may have been directed at crossed purposes. Group members were not realizing the fullest social-needs satisfaction nor satisfaction from task-achievement. Esprit was low.

4. A "high" socioeconomic setting, in this study, was defined as one located in the fringe areas of the city, with an average

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[1] The climate descriptions of Halpin and Croft (see pp. 25-26) were not applicable to the terms "open" and "closed," as used in this study, except as examples of the extremes to be approached in the selection process.

annual family income in the $7,000 - $9,000 range.[1]

5. A "low" socioeconomic setting, in this study, was defined as one located in the inner-city areas, with an average annual family income in the $4,000 - $5,000 range.[2]

Limitations of the Study

1. The contrasts in socioeconomic setting and organizational climate, in this study, were not of the ultimate extremes, since they had to be achieved within certain set limitations: (1) the criteria of both variables had to be met in each school, and (2) pairs of schools had to be matched as closely as possible in respect to both variables. Therefore, schools were chosen which, on the continuums, most nearly approached the "high" or "low" type socioeconomic settings[3], and the "open" or "closed" type organizational climates.

2. Data gathering was carried on in paired schools over a six-week period, not simultaneously in all four schools. Problems may have differed somewhat because of factors such as weather, and activities occurring on school-system-wide schedules.

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[1] This definition encompassed a group in the city population which resembled the social class strata labeled "middle-middle" or "low-middle" by Lloyd W. Warner and Robert J. Havighurst in their classic work, Who Shall Be Educated? (New York: Harper and Brothers, Publishers, 1954), p. 190.

[2] Income figures were obtained from the 1960 Federal Census data.

[3] The range of average annual family income, reported in the City of Detroit Federal Census tracts of 1963, was from $2,735 to $10,135, with only one example at each extreme. Most high income families have made their exodus to the suburbs, therefore, strictly "high" socioeconomic settings for two schools with contrasting climates were not available in the city.

3. Sampling was done in only one slice of time - - a six-week period in early spring. This may not give a complete picture of problems over an entire school year. Particular reference must be made to differences in problems which occurred in the contrasting socioeconomic settings at beginnings of semesters, when indigent pupils were processed for supplies and services. These differences are not shown in the data.

Basic Assumptions

1. An assumption was made that the organizational climate, as perceived by the staff, permeated the entire school.
2. The most basic assumption was that the problems which occurred in the school offices adequately represented and reflected the nature of the school learning environment, and the kinds of challenges presented to the leadership abilities of the principals in the contrasting school situations.
3. The final assumption was that for the purposes of this study, the backgrounds and preparation of the "coding experts" were sufficient to establish the reliability and validity of the data.

Related research and literature germain to this investigation, such as: studies of environmental conditions, leadership behavior of principals, administrative theory and organizational climate, are reviewed and discussed in the next chapter.

CHAPTER II

RELATED RESEARCH AND LITERATURE

Studies of Environmental Conditions

A number of investigations have been concerned with the identification of crucial factors in the learning environment which provide the matrix for growth of behavioral patterns leading to juvenile delinquency, and perpetuation of adult dependency. Wattenberg (1960) concluded that repeated delinquency among boys was closely related to school failure; and that school failure was more closely related to interpersonal frustrations than to intellectual deficiencies.[1]

Since poor self-concepts seem to be a common denominator among delinquents, Wattenberg and Clifford (1962) explored the previously established relationship between self-concept and reading difficulties.[2] They sought to determine whether poor self-concepts led to reading difficulties, or unfortunate experiences in reading led to poor self-concepts. Data regarding self-concepts, ego strength, and intelligence were gathered on 185 children in the beginning kindergarten in two Detroit elementary schools. Two years after completion of kindergarten, they were measured again in terms of self-concepts, ego strength, and reading achievement. The results indicated that self-concept showed a causal relationship to reading achievement, and that progress in reading did not show a marked effect in the formation of the self-concept.

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[1] William W. Wattenberg, Relationship of School Repeated Delinquency Among Boys with Intelligence in the Bottom Fifth of the Population, Final Report of Cooperative Research Project No. 201, U.S. Office of Education (Detroit: Wayne State University, 1960).

[2] William W. Wattenberg and Clare Clifford, Relationship of the Self-Concept to Beginning Achievement in Reading, Final Report of Cooperative Research Project No. 377, U.S. Office of Education (Detroit: Wayne State University, 1962).

A need for caution regarding these findings is indicated, since different researchers have come to various conclusions. Sears (1957)[1] and Perkins (1958)[2] reported significant variables associated with teacher behavior and school experiences, which led to change in self-perceptions of pupils. Whether good self-concepts are antecedent or subsequent to school success may probably never be resolved. The existence of a close inter-relationship, however, is clear.

Rogers (1951) stated that a human being is an organism, a total organized system, in which alteration of any part may produce changes in any other part. Once the self-concept is developed, it becomes the focal point around which all experience is organized - - the most significant determinant of the individual's response to the environment.[3]

The consequences of poor self-concepts and poor school achievement have been documented repeatedly. Children with reading difficulties were found to be insecure and fearful in emotionally challenging situations; and lacking in self-confidence, for which they compensated with overly aggressive behavior toward their peers. Retarded readers were studied as to their feelings concerning life role, ability to get satisfaction from the environment, and the quality of their interpersonal relations. They were found to be irritable and lacking in feelings of security.[1]

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[1] P. S. Sears, "Problems in the Investigation of Achievement and Self-Esteem Motivation," Nebraska Symposium on Motivation, ed. M. R. Jones (Lincoln: University of Nebraska Press, 1957), cited by Wattenberg and Clifford, op. cit., p. 8.

[2] H. V. Perkins, "Factors Influencing Change in Children's Self-Concepts," Child Development, XXIX (1958), pp. 203-20, cited by Wattenberg and Clifford, op. cit., p. 8.

[3] Carl Rogers, Client-Centered Therapy (New York: Houghton Mifflin, 1951), cited by Wattenberg and Clifford, op. cit., pp. 6-8.

Even though self-concepts, as such, are not directly investigated in this study, the possible effects of organizational climate upon pupil behavior problems may indicate the degree of frustration imposed by the school upon the child's interpersonal relations, hindering or facilitating the development of a favorable self-image. Implications may be that efforts to change the organizational climate may offer one avenue for partial control of delinquency and drop-out rates which have been linked to self-concepts.

The influence of socioeconomic background upon academic success and the development of a child's abilities and disabilities to establish satisfactory interpersonal relations, has been underscored by several studies. Sexton (1961) emphasized the geometrically compounding nature of social class influences upon the total "life-space" environment of the child. She analyzed and compared school facilities, personnel and services; achievement and personal adjustment of pupils in high and low socioeconomic areas of Detroit. She found older school buildings, less supplies, poorer equipment, and less qualified teaching personnel in the schools in lower class areas of the city. Statistical evidence supported her view that the social class background of the child served to accentuate already existing privilege or deprivation in educational opportunities and personality development, in the home, community, and particularly in the school.[1]

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[1] Wattenberg and Clifford, op. cit., p. 5.

The effects of socioeconomic conditions upon the school adjustment of a child were discussed by Wineman (1963). He claimed that the traditional rigidity and inadaptability of schools in the differing socioeconomic settings, contributed to growth in delinquency by subjecting some children to a series of frustrating situations.

> The origin of this 'frustration' . . . seems to arise from the freezing of American public school standards (as to both behavior and learning performance) to the middle-class image. This is held to produce in the lower-class child a negative orientation toward school adjustment, at best, and open warfare at worst.[2]

Wineman stated that other pressures which pushed children into delinquency included a "status-anxiety" which is "foisted" upon lower than middle-class groups as a consequence of their exclusion from successful competition in the class system. Besides these sociological theories of social disorganization and deviant sub-cultures, Wineman mentioned family-centered theories (impact of parental discipline, parent-role behavior, the emotional climate of the family, and family structure and interaction patterns) which have contributed significantly to the understanding of delinquency.[3]

However, he pointed out that "the school has more contact with the average child than any other extrafamilial non-institutional source; furthermore, it is a source of intense psychological influence and penetration in the development of the child, therefore, the total school climate would have to be taken into account."[1] In assessing the effectiveness of the school in delinquency control, much depends on the school administration and its ability to bring about change.

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[1] Patricia C. Sexton, Education and Income (New York: Viking Press, 1961).

[2] Wineman, op. cit., p. 3.

[3] Ibid.

The N.E.A. Educational Policies Commission, also, emphasized the critical need for changes in school structural origanization, teaching methods, curriculum, attitudes of teaching personnel; education, selection, and orientation of school principals and teaching staff (not only in deprived areas but also in changing neighborhoods). Basic differences in needs were pointed out in regard to staffing patterns and ratios in deprived area schools, such as: smaller class size, counselors in elementary schools, school-community agents, remedial teachers, more health services, after-school program directors, and others. The report included pleas for greater autonomy for individual schools; and flexible, creative principals, able to maintain high morale while effecting the changes needed in the constant adjustment and improvement of the school.[2]

Working papers of twenty-four selected educators engaged in the Conference on Curriculum and Teaching in Depressed Urban Areas at Columbia University stressed concerns raised by the differences between schools located in contrasting socioeconomic settings. Differences in the modes of reaction to learning experiences between the disadvantaged and middle-class child were highlighted. The lower class child being: motoric, physical-visual, concrete, thing-oriented, and nonverbal. The middle class child being: conceptual, aural, abstract-symbolic, idea-oriented, and verbal. These differences suggest need for modifying the school approach to teaching methods and materials.[1]

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[1] Ibid.

[2] Educational Policies Commission, Education and the Disadvantaged Child (Washington: NEA, 1963).

Carl Marburger, former director of Detroit's Great Cities School Improvement Project, posed the following questions:

> Is a special kind of leadership necessary in depressed-area schools? To what extent is pupil success or failure a net yield of school characteristics and atmosphere? What is the significance of the principal's administrative style in determining the school's adaptability to change?[2]

The Litwak-Meyer School-Community Research Project, conducted as an integral part of the Detroit Great Cities School Improvement Program, is investigating, among other things, the effects of the administrative style of principals in schools located in contrasting socioeconomic settings. The major research purpose concerns the influence of school-family relationship upon the educational motivation and citizenship of elementary school children. The hypothesis being that those relationships which tend to promote complementary efforts by the family and the school will encourage educational motivation, whereas those that fail to promote such complementary efforts may discourage educational motivation. The basic assumption is that the character of school-family relationships will be affected by the types of families that confront the school, as well as by the philosophy and administrative style that the school may have.[1] (Three of the four schools chosen for this study are included in the Litwak-Meyer research.)

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[1] A. Harry Passow (ed.), Education in Depressed Areas, Working Papers of 24 Selected Educators in the Conference on Curriculum and Teaching in Depressed Urban Areas Held at Columbia University in 1962 (New York: Columbia University Press, 1963), p. 284.

[2] Ibid., p. 282.

Studies of Leadership Behavior and Administrative Theory

A strong hunch exists that the "change-agent"[2] quality in the leadership behavior of principals is the key element in determining the nature of the learning environment. After exploring many "blind alleys," research in educational administration has moved its focus of attention from examination of the personality traits of successful administrators, and priority listings of administrative competencies, to investigations of organizational roles and behavioral studies of leadership. Throughout these later studies, administration as a behavior and a social process consistently emerged in a two-dimensional conceptual framework.

Chester Barnard called the two dimensions "effectiveness" and "efficiency."[3] "Effectiveness" may be aligned with the concept of productivity, and "efficiency" with the conservation of psychic energy in individuals and the group (high morale). Cartwright and Zander labeled the two dimensions "goal achievement" and "group maintenance"[4] - - analogous to productivity and morale. Halpin, Stogdill, and others engaged in leadership studies at Ohio State University identified the two dimensions as "initiating structure" and "consideration."[1] Again, the analogy to productivity - - or task orientation, and morale - - or people orientation is noticeable. However, now the concept of "initiating structure" had added overtones of "change-agency" to the leadership task.

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[1] Hectographed memorandum to District Administrators of the Detroit Public Schools regarding purposes of the Litwak-Meyer School-Community Research Project, October 25, 1962. Results of this study have not been published yet. (See footnote p. 2.)

[2] Ronald Lippitt, Jeanne Watson, and Bruce Westley, The Dynamics of Planned Change (New York: Harcourt, Brace and Co., 1958), pp. 91-126.

[3] Chester Barnard, The Functions of the Executive (Cambridge: Harvard University Press, 1938), pp. 60-61.

[4] Darwin Cartwright and Alvin Zander, Group Dynamics: Research and Theory (Evanston, Illinois: Row, Peterson and Co., 1953), p. 541.

Campbell states that "the most complete and insightful development of this proposition has been the work of Getzels and Guba."[2] Their theory describes administration as a social process in which behavior is viewed as a result of the interaction of both the nomothetic and the ideographic dimensions of a social system. "Administration is conceived structurally as the hierarchy of subordinate-superordinate relationships within a social system; and functionally this hierarchy is the locus for allocating and integrating roles and facilities in order to achieve the goals of the social system."[3] The two dimensions of the social system are: the task-oriented "nomothetic," consisting of the institution, role and expectation; and the people-oriented "ideographic," consisting of the individual, his personality, and his needs - disposition.

Among the more recent expansions and refinements of the original nomothetic-ideographic model is a third (intermediate) dimension.[1] This "transactional" dimension is a blend of the other two dimensions and consists of the elements of group, climate, and intentions. Within this "transactional" dimension, the nomothetic (institutional) and ideographic (individual) dimensions interpenetrate one another. The processes within a social system may be viewed as a dynamic transaction between roles and personality, in which both the socialization of personality and the personalization of roles take place. In these terms, "transactional" seems to imply "situation-oriented," rather than "institution-oriented" (nomothetic) or "personality-oriented" (ideographic) goals and behaviors. The larger environment within which both the institution and individual operate and interact is made up of three indigenous elements: ethos, mores, and values.[2]

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[1] Andrew W. Halpin and B. James Winer, "A Factorial Study of the Leader Behavior Descriptions," Leader Behavior: Its Description and Measurement, ed. Ralph M. Stogdill and Alvin E. Coons (Columbus: Ohio State University, 1957).

[2] Roald F. Campbell, "Implications for the Practice of Administration," Behavioral Science and Educational Administration, Sixty-third Yearbook of the National Society for the Study of Education, Part II, ed. Daniel E. Griffiths (Chicago: University of Chicago Press, 1964), p. 293.

[3] Daniel E. Griffiths, "The Nature and Meaning of Theory," Ibid., p. 101.

The Getzels-Guba theory model is shown on the following page in diagram forms as Figure 1.

> The unique task of the administrator can now be understood as that of mediating between these two sets of behavior-eliciting forces, that is, the nomothetic and ideographic, so as to produce behavior which is at once organizationally useful as well as individually satisfying.[3]

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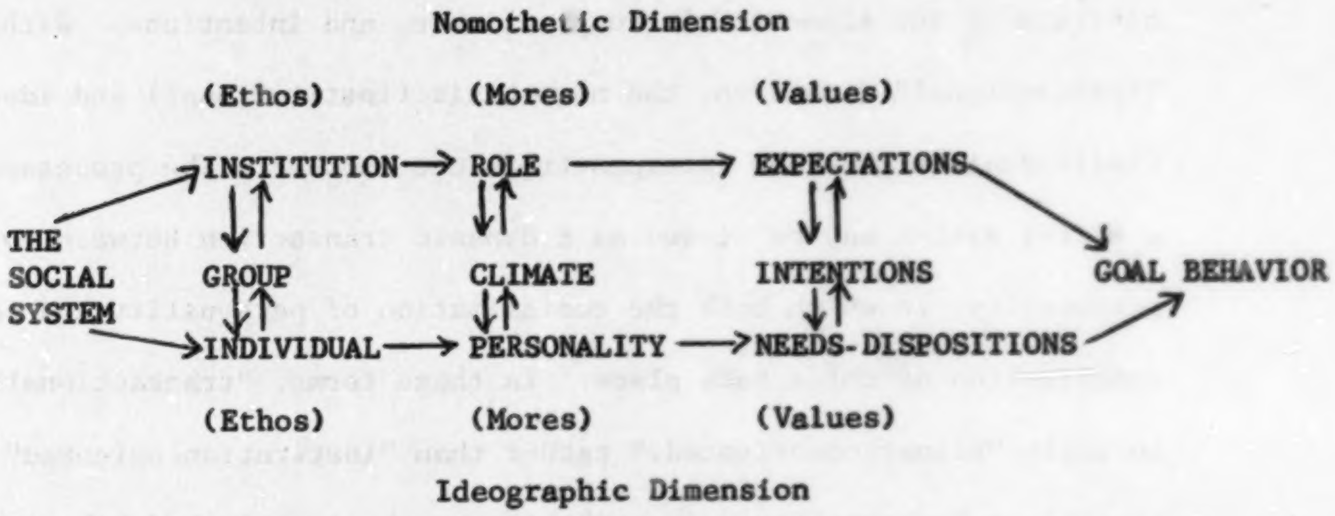
[1] Egon G. Guba, Role, Personality, and Social Behavior (Columbus: Bureau of Educational Research and Service, The Ohio State University, September, 1958). (Mimeographed.)

[2] Robert E. Sweitzer, "An Assessment of Two Theoretical Frameworks," Educational Research: New Perspectives, ed. Jack A. Culbertson and Stephen P. Hencley (Danville, Illinois: The Interstate Printers and Publishers, Inc., 1963), p. 208.

[3] Egon G. Guba, "Research in Internal Administration - - What Do We Know?" Administrative Theory as a Guide to Action, ed. Roald F. Campbell and James M. Lipham (Chicago: Midwest Administration Center, University of Chicago, 1960), p. 121.

Fig. 1. --Diagram of the Getzels-Guba Theory of Administration as a Social Process.[1]


Nomothetic Dimension
(Ethos)
(Mores)
(Values)
INSTITUTION
ROLE
EXPECTATIONS
THE SOCIAL SYSTEM
GROUP
CLIMATE
INTENTIONS
GOAL BEHAVIOR
INDIVIDUAL
PERSONALITY
NEEDS-DISPOSITIONS
(Ethos)
(Mores)
(Values)
Ideographic Dimension

Lonsdale stated the primary task of administrative leadership to be sustaining the organization in "dynamic equilibrium" through a developing integration of both basic purposes of organizations: "task-achievement" as well as "needs-satisfaction." The term, "dynamic," connoting a change-oriented rather than static type of organizational equilibrium.[2] This seems to denote that administrative functions lie primarily in the "transactional" zone, mediating and maintaining "dynamic equilibrium" between the two primary dimensions, while effecting changes in the structure of the organization, in any of its processes, or in its goals and purposes. The concept of "organizational climate" is an element in this "transactional" zone.

Griffiths[3] discussed bringing about administrative change and innovation in organizations in terms of Hearn's system theory,[1] in which a system may be simply defined as a complex of elements in mutual interaction. The concept sees each system (organization) as surrounded by a supra-system (the environment) and a sub-system (administration) - - all three in dynamic interplay with each other. Relating these theories to this study, the socioeconomic setting would comprise the supra-system, and organizational climate the sub-system affecting the school (the system) in terms of problems brought to the offices. Griffiths claims that most changes result as responses to demands of the supra-system, when a system is placed under continuous unrelenting stress; and that change from the inside is impeded by the hierarchical structure of organizations. "The functional nature of each sub-system generates conflict-reducing behavior which is counter to change-inducing behavior. . . . Change will be expedited by the appointment of outsiders as chief administrators."[2]

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[1] Ibid.

[2] Richard C. Lonsdale, "Maintaining the Organization in Dynamic Equilibrium," Behavioral Science and Educational Administration, ed. Daniel E. Griffiths (Chicago: University of Chicago Press, 1964), p. 142.

[3] Daniel E. Griffiths, "Administrative Theory and Change in Organizations," Innovation in Education, ed. Matthew B. Miles (New York: Bureau of Publications Teachers College, Columbia University, 1964), pp. 427-29.

Since healthy organizations need to develop and encourage high adaptability to change, the next propositions are pertinent to the inquiry of this study. Hearn found that systems may be "open" or "closed." An "open" system relating to and making exchanges with its environment; while a "closed" system does not, being characterized, instead, by an increase in entropy. Griffith's[3] own theory of administration being the directing and controlling of decision-making processes, rather than decision-making in itself, fits neatly into the concept of the "open" system of Hearn operating within the "transactional" zone of the Getzels-Guba model. The same concepts of "open-ness" and "closed-ness" are found in the Halpin and Croft[1] study of organizational climate which resulted in the construction of the "Organizational Climate Description Questionnaire."

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[1] Gordon Hearn, Theory Building in Social Work (Toronto: University of Toronto Press, 1958), pp. 44-50.

[2] Griffiths, op. cit., p. 435.

[3] Daniel E. Griffiths, Administrative Theory (New York: Appleton-Century-Crofts, Inc., 1959), pp. 71-91.

Studies of Organizational Climate

Earlier research on organizational climate had been done by Mathews[2] (1962) in which she used nine Western hospitals to measure the following five dimensions of administrative climate: leadership, goal-integration, decision-making, influence, and personal relations. The measures of these dimensions were made on a continuum ranging from a "social philosophy" of administration (with generally supportive interaction, and wide participation of the entire staff in decision-making), to a "technological philosophy" (with decisions, rules, and regulations made at the top of the organization's hierarchy and passed down to the personnel). The two extremes of the continuum correspond well with the extremes in systems concepts of "open-ness" and "closed-ness."

Stern[3] (1963) also studied the effects of the organizational climate of colleges on students in terms of individual "needs" and organizational "press" (ideographic and nomothetic dimensions).

Halpin and Croft (1963) developed "The Organizational Climate Description Questionnaire" and administered it to 1,151 teachers and principals in 71 elementary schools in six states in six different regions of the United States. By factor analysis they were able to delineate six distinct profiles of organizational climates, ranging on a continuum from "open" to "closed." They described the various profiles as follows:

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[1] See footnote p. 4.

[2] B. Phelps Mathews, "Inconsistency: A Complex Problem in Administration," Hospital Administration, VII (Fall 1962), pp. 21-35.

[3] George G. Stern, "Characteristics of the Intellectual Climate in College Environments," Harvard Educational Review, XXXI (Winter 1963), pp. 5-41.

> 1. The Open Climate describes an energetic, lively organization which is moving toward its goals, and which provides satisfaction for the group members' social needs. Leadership acts emerge easily and appropriately from both the group and the leader. The members are preoccupied disproportionately with neither task achievement nor social-needs satisfaction; satisfaction on both counts seems to be obtained easily and almost effortlessly. The main characteristic of this climate is the 'authenticity' of the behavior that occurs among all the members.
>
> 2. The Autonomous Climate is one in which leadership acts emerge primarily from the group. The leader exerts very little control over the group members; high Esprit results primarily from social-needs satisfaction. Satisfaction from task achievement is also present, but to a lesser degree.
>
> 3. The Controlled Climate is characterized best as impersonal and highly task oriented. The group's behavior is directed primarily toward task accomplishment, while relatively little attention is given to social-needs satisfaction. Esprit is fairly high, but it reflects achievement at some expense to social needs satisfaction. This climate lacks openness, or 'authenticity' of behavior, because the group is disproportionately preoccupied with task achievement.
>
> 4. The Familiar Climate is highly personal but undercontrolled. The members of this organization satisfy their social needs, but pay relatively little attention to social control in respect to task accomplishment. Esprit is not extremely high because the group members secure little satisfaction from task achievement. Hence, much of the behavior within this climate can be construed as 'inauthentic.'
>
> 5. The Paternal Climate is one in which the principal constrains the emergence of leadership acts from the group and attempts to initiate most of these acts himself. The leadership skills within the group are not used to supplement the principal's own ability to initiate leadership acts. Accordingly, some leadership acts are not even attempted. Little satisfaction is obtained in respect to either achievement or social needs. Esprit among members is low.

6. The Closed Climate is characterized by a high degree of apathy on the part of all members of the organization. The organization is not 'moving;' Esprit is low because neither social-needs satisfaction nor satisfaction of task achievement is secured by the members. The members' behavior can be construed as 'inauthentic;' indeed, the organization seems to be stagnant.[1]

Subtests of the OCDQ describe the characteristics of the teachers' behavior and the principals' behavior as follows:

Teacher's Behavior

1. Disengagement - indicates that teachers do not work well together. They pull in different directions with respect to the task; they gripe and bicker among themselves.

2. Hindrance - refers to the teachers' feeling that the principal burdens them with routine duties, committee demands, and other requirements which the teachers construe as unnecessary busywork.

3. Esprit - refers to 'morale.' The teachers feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

4. Intimacy - refers to the teachers' enjoyment of friendly social relations with each other.

Principal's Behavior

5. Aloofness - refers to behavior by the principal which is characterized as formal and impersonal. He 'goes by the book' and prefers to be guided by rules and policies rather than to deal with the teachers in an informal, face-to-face situation.

6. Production Emphasis - refers to behavior by the principal which is characterized by close supervision of the staff. His is highly directive and task-oriented.

7. Thrust - refers to behavior marked not by close supervision of the teacher, but by the principal's attempt to motivate the teachers through the example which he personally sets. He does not ask the teachers to give of themselves anything more than he willingly gives of himself; his behavior though

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[1] Andrew W. Halpin and Don B. Croft, "The Organizational Climate of Schools," Administrator's Notebook, XI (March 1963), pp. 2-3.

> starkly task-oriented, is nonetheless viewed favorably by the teachers.
>
> 8. Consideration - refers to behavior by the principal which is characterized by an inclination to treat teachers 'humanly,' to try to do a little something extra for them in human terms.[1]

Several cautions about this measure of organizational climate must be considered. Even though it represents research sophistication in design and wording, having been tested and revised repeatedly to exclude items which possessed tone or language inviting an automatic "rigged" response, Halpin and Croft admit that it yields a climate description primarily in terms of teacher-principal relationships. They state,

> We recognized that among the numerous factors which could be conceived as defining the Climate of a school, the following - - at the very least - - would need to be taken into account: the socioeconomic status of the school's patrons; the biographical and personality characteristics of the principal and teachers; the 'quality' of the students; the attitudes of the parents toward the school; the school's physical plant; the teachers' salary schedule; the educational and administrative policies of the school district; the location of the school; and, of prime importance, the social interactions that occur between the teachers and the principal.[2]

They chose to limit the scope of the climate descriptions to the one component - - the "social component" of interaction patterns between the principal and staff - - since all facets could not be handled simultaneously. The "external" factors noted above were considered to be reflected in a portion of the interaction pattern between teachers and the principal. Halpin and Croft felt that such factors were tapped, even if only indirectly, by the OCDQ.

Another limitation which the researchers recognized was that the description of climate rested solely on teachers' perceptions of their principal's behavior. Incongruence of perceptions of leader behavior by superiors, self, and subordinates had been documented earlier by Halpin when he developed a similar instrument, the "Leader-Behavior Description Questionnaire."[1] Halpin and Croft also recalled that Charters had found that variance in teachers' descriptions of principals was sometimes associated more closely with variance in elements within the perceiver than with variance in the behavior of the principals.[2] They concluded that "how the leader really behaves is less important than how members of his group perceive that he behaves; it is their perception of his behavior that will determine the behavior of the group members, and will hence define the Organizational Climate."[3]

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[1] Ibid., p. 2.

[2] Ibid., p. 7.

Organizational climate might be defined as the global assessment of the interaction between the task-achievement dimension and the needs-satisfaction dimension within the organization - - the extent of the task-needs integration. Integration of these two dimensions depends greatly upon the degree of congruence achieved in the role expectations held by the various elements operating in the total organizational milieu. The general assumption often made is that conflict in role perceptions results in organizational dysfunction.

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[1] Andrew W. Halpin, The Leadership Behavior of School Superintendents, The School-Community Development Study Monograph Series, No. 4 (Columbus: College of Education, Ohio State University, 1956), p. 8.

[2] Werrett W. Charters, "Teacher Perceptions of Administrator Behavior," A Paper Prepared for the American Educational Research Association. Atlantic City, New Jersey, February 20, 1962.

[3] Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools (Chicago: Midwest Administration Center, University of Chicago, 1963), p. 10.

Feldvebel[1] (1964) used the Halpin and Croft definitions of organizational climate in a study investigating two possibilities: (1) that organizational climate was a function of the socioeconomic status of the school community, and (2) that the output of the school as measured by standard achievement tests, was a function of the organizational climate as well as the socioeconomic status of the school community.

Using Warner's Index of Status Characteristics, a random sample was selected within each of three socioeconomic stratum, to produce a total sample size of thirty elementary schools. The schools were in municipalities of between 2,500 and 20,000 residents within the Northeastern Illinois Metropolitan Area. Pupil achievement data (based on a sample of thirty fifth-grade pupils in each school) were secured through use of the "Stanford Achievement Test," and the "Organizational Climate Description Questionnaire" was used to collect the "climate" data.

Analysis of variance, testing the relationship between the socioeconomic status of the community and the organizational climate of the school, showed no association between the global concept of organizational climate and the socioeconomic level of the community. However, certain elements of the subtests of the OCDQ, "Hindrance" in teachers' behavior, and "Consideration" in the principal's behavior seemed to be significantly associated with the social class of the community - - "Hindrance" with lower class and "Consideration" with upper social classes. "Production Emphasis" and "Consideration," characteristics of the principal's behavior seemed to be significantly associated with pupil achievement - - "Production Emphasis" negatively and "Consideration" positively.

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[1] Alexander M. Feldvebel, "Organizational Climate, Social Class, and Educational Output," Administrator's Notebook XII, No. 8 (April 1964).

Feldvebel concluded that these relationships may be explained in terms of the more direct effects of varying financial support levels associated with the social class level of the community. Higher support levels tend to be reflected in higher levels of professionalism on the staff. Principal behavior described by the "Consideration" subtest and the quality of professionalism are closely related. The fact that two of the three dimensions found to be significantly associated with social class levels of the community describe preceptions of the principal's behavior may indicate that: (1) community power structure may play a greater role in selection of the principal than in the selection of teachers; (2) superintendents and boards in their selection procedures show awareness of the fact that principals are more visible to the community than teachers; and (3) the principal is more closely identified with the community values than the rest of the school staff because his role demands that he mediate between the community and the organization.

The negative association between social class and "Hindrance" (the teacher's feeling that the principal overburdens him with routine duties) may be explained by the inadequate professional and clerical staffing of schools in communities providing less financial support.

Feldvebel states the following implication:

> Since most of the variance in the socioeconomic class variable was seen to be associated with dimensions of the principal's behavior rather than with the group behavior characteristics, it appears that there may be conflict within schools with respect to the organization's tasks as perceived by teachers and principals. In addition, the biographic and personality characteristics of teachers may turn out to be more important predictors of the group dimension of organizational climate than is the social class of the community; this relationship would suggest the possibility of

controlling organizational climate through the selection of teachers.[1]

The logical areas for present and future research in educational administration seem to lie in explorations of cause and effect relationships of climate, congruence of role perceptions, and the "change-agent" elements in the leadership behavior of principals.

Related Research-in-Progress

Concurrent with this study are two closely related research projects. Gross and Herriott[2] at Harvard University have released the first report of an investigation of the professional leadership of elementary school principals. This is part of a larger project, the National Principalship Study, which will continue to explore the principals' role performance and reactions, role conflicts to which principals are exposed, and the determinants and effects of the principals' administrative behavior. Interviews and questionnaires were used with 1,303 teachers, 175 principals and their superiors in 40 large school systems in all regions of the United States. They defined Executive Professional Leadership (EPL) as the behavior of executives of professionally staffed organizations aimed at achieving organizational objectives through influencing staff members.[3] Their objective was to isolate determinants and effects of the EPL the principals offered their schools. To ascertain the effects of the EPL of principals they assessed staff morale, the professional performance of teachers, and pupils' learning. Positive relationships were found between EPL and each of the three dimensions listed. This serves to refute the argument of critics that principals should not intervene to offer professional leadership to professional staff but simply provide management services.

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[1] Ibid., p. 3.

[2] Neal Gross and Robert E. Herriott, The Professional Leadership of Elementary School Principals, Final Report No.1, Cooperative Research Project No. 853 with the U.S. Office of Education (Cambridge: Graduate School of Education, Harvard University, 1964).

[3] Ibid., pp. 5-13.

However, the question may be raised of validity of the findings regarding the relationship of EPL to staff morale and the professional performance of teachers. There seems to be some evidence of circularity in the data gathered to establish the EPL of principals, and the data gathered on staff morale and the professional performance of teachers with which the EPL was correlated. The teacher questionnaire used to measure the principal's EPL seemed to reflect and measure similar staff attitudes and perceptions as the questions answered by the same teachers regarding morale and professional performance of the staff.

Other pertinent findings of the Gross study were that the EPL of principals was positively associated to participation in selection of the teachers for their own buildings, and to the professional leadership of their immediate superiors. Data showed that officials who had the closest and most frequent contact with principals exerted the greatest influence on their leadership behavior. Recommendation was made that superintendents of large systems concentrate their energies on raising the EPL of district administrators - - working through the existing chain of command to raise the EPL of principals.

Their data showed a negative association between EPL and the amount of experience and formal education of principals - - a "trained incapacity." The recommendation was that school systems assume responsibility for training and development of executive personnel in collaboration with colleges.

The other concurrent research study relating closely to this one, concerns congruence in role perceptions and its effect on implementing change in elementary schools. Eye, Lipham, and Gregg are engaged in a three-year study of approximately 30 city school systems in Wisconsin to determine the extent to which conflict among decision-making roles is related to the nature of the teaching-learning situation. The precise statement of purpose is "to investigate the relationship between congruence in the perception of the decision-making responsibilities of administrative and supervisory personnel to planned and implemented change in the instructional program of public school systems."[1] Data gathering instruments include questionnaires, observations, interviews, and tests administered to teachers, principals, general and special supervisors, and superintendents. Procedure will be to determine congruence in perceptions of various personnel; institute operations to increase congruence of perceptions in an experimental group of schools; and finally, to assess planned and implemented changes in instructional programs of the schools in the experimental and control groups, correlating them with the degree of congruence in perceptions. Final reports of the results are forthcoming in 1966.

Meanwhile, this study, investigating the effect of socioeconomic

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[1] Glen G. Eye, James M. Lipham, and Russell T. Gregg, "Relationship Between Instructional Change and the Extent to Which School Administrators and Teachers Agree on the Location of Responsibilities for Administrative Decisions," Progress Report Submitted to the U.S. Office of Education, Project No. 1913 (Madison: University of Wisconsin, 1964), p. 1. (Mimeographed.)

setting and organizational climate on problems brought to elementary school offices, capitalized on the research findings of Halpin and Croft by using their carefully developed "Organizational Climate Description Questionnaire." The overall general objective was to extend knowledge of the relationships and interactions of the effects of the external and internal environment of the school. Procedures are detailed in the next chapter.

CHAPTER III

PROCEDURES

Permission and cooperation of the Research Department of the Detroit Public Schools was secured late in December of 1963 to conduct this research project in four Detroit elementary schools, containing grades kindergarten through six, during the months of February through April, 1964. Participation was to be voluntary on the part of principals and school staffs. It was left up to the researchers to "sell" the idea and solicit the willing cooperation of the schools.

The legal liabilities and responsibilities of researchers and participants were explored. Opinions were received that so long as the videotapes and the information obtained were used for research purposes only, no-one would be placed in jeopardy.

A contract was negotiated with General Television Network to provide technical personnel and equipment for carrying out this project. Additional needed equipment was contributed by the Teacher Education Project[1] of Wayne State University, and the consultive services of its director, Dr. Edward Bantel, were utilized.

Selection of Schools

It was felt that the study would have added value if the schools could be selected from among the control schools of the Detroit Great

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[1] The Teacher Education Project at Wayne State University (financed jointly by the University and The Ford Foundation) has pioneered in the use of TV media in educational research.

Cities School Improvement Project. These schools have undergone related research also as part of the School-Community Study conducted by Drs. Eugene Litwak and Henry Meyer of the University of Michigan. Coordination with these other research programs would serve to reinforce, check, and expand in depth and breadth, mutual findings in regard to the school learning environment. Because of their experience as participants in the other studies, the assumption was made that principals and staffs in these control schools were likely to possess more positive orientations toward research in their thinking, and feel less threat to their security should they become involved in this project. Principals in these schools had been willing to submit to extensive depth interviews by trained researchers from the University of Michigan School of Social Work. They had also permitted the administration of separate leader-behavior-type description questionnaires to the staffs of their schools and the parents in the community. These schools were to be given preference in the final selection if they met the required criteria of this study.

In the selection of schools, congruence of judgment was sought from four sources of authority in identifying several schools which on the continuum approached the extremes toward either the "open" or "closed" type organizational climates,[1] and were located in socioeconomic settings which provided the maximum contrast possible within the City of Detroit. The opinions of the nine District Administrators of the Detroit Public Schools were solicited by a written communication[2] distributed and discussed at a meeting held in December 1963. Dr. Carl Marburger, director of the Detroit Great Cities Project at that time, was consulted. His recommendations of schools meeting the selection criteria were based on personal experience as a researcher in those schools. Drs. Litwak and Meyer identified such schools from information obtained in the Administrative Style Questionnaire, which they had developed and used in their study.

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[1] Only schools which had had the same principal for a minimum of three years were considered. It was felt that a principal's influence on the climate of a school could hardly be established in less time.

[2] See Figure 9 in Appendix A.

On the basis of these recommendations, permission and cooperation of thirteen elementary school principals were secured to administer the twenty-minute "Organizational Climate Description Questionnaire," as a confirming instrument, at regular staff meetings during the months of January and February, 1964. Cooperating principals were assured that the videotapes were to be used for research purposes only. Showings of the tapes would be limited to the research staff and to each participating principal himself. In cases where tapes might be shown to others, the express permission of participants would be sought in advance.[1] Additional assurances were given that the identity of all individuals appearing in the tapes would be respected and protected. Principals were informed also that, if desired, it would be possible for each one to view, on the spot, the tapes made daily in the school. Guarantees were given that anything in the tapes which they considered objectionable or as "invasion of privacy" would be erased upon request before the tapes left their buildings.[2] All thirteen schools were willing to participate, if selected.

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[1] Subsequently, all four participating principals signed releases allowing the showing of tapes at various meetings of professional educational organizations.

[2] During the ensuing 450 hours of actual videotape recording in the project only one erasure of a single statement was requested.

The results of the "Organizational Climate Description Questionnaire" (OCDQ) given in the thirteen Detroit schools were processed by computers and are shown below in Figure 2. Scores which are circled indicate the type of climate which predominated in the school.

Fig. 2. --Climate similarity scores[a] of thirteen Detroit elementary schools, the results of the "Organizational Climate Description Questionnaire" administered in January and February, 1964.

SCHOOLS TESTED	ORGANIZATIONAL CLIMATES					
	OPN	AUT	CNT	FAM	PAT	CLS[b]
School #1	97	98	57	94	67	38
School #2 (School D)	68	68	52	71	56	㊽
School #3	76	80	54	72	45	48
School #4	63	75	78	48	37	49
School #5	58	69	56	56	34	64
School #6	89	90	61	82	53	34
School #7	63	69	62	56	40	53
School #8	75	77	60	68	46	38
School #9 (School A)	94	97	59	77	46	㉜
School #10 (School C)	(51)	67	69	56	㊶	66
School #11	77	74	52	70	56	35
School #12 (School B)	(54)	80	70	62	㊳	59
School #13	104	105	66	82	53	32

[a] A low score indicates close similarity with the designated climate.

[b] Open, Autonomous, Controlled, Familiar, Paternal, Closed.

Not one of the thirteen schools proved to be primarily "open" in organizational climate according to this measure Seven schools appeared to have "closed" climates, and six seemed to have "paternal" climates. This clustering at the one extreme of the continuum may have been evidence of a tendency toward uniformity in organizational patterns imposed by a centrally-controlled large-city school system. However, these were the

Detroit schools recommended as examples likely to include both "open" and "closed" type climates. Therefore, two schools were selected from among those with "paternal" climates which showed the next closest alternative climate to be an "open" one. These two schools were considered to have mixed climates of the "paternal-open" type. As such, they most closely approached the requirements of being near the "open" climate extreme. They became the two "open" schools of this study - - School #10 as "School C" in a "high" socioeconomic setting, and School #12 as "School B" in a "low" area.

The selection of the two "closed" climate schools had to be tempered by several intervening considerations. School #2 was chosen as "School D" for this study even though its climate similarity score was not among those closest to the "closed" extreme. This was done because it was the best example available of a school located in a "high" socioeconomic setting with a "closed" type climate.

Inasmuch as no other school was able to meet the "closed-climate-in-a-low-setting" criteria of this study better, nor achieve more congruence of judgment from the four sources of authority, School #9 was chosen as "School A," the "low-closed" school of this study. Three authorities had recommended it as likely to possess an "open" organizational climate. The recommendations were based primarily upon impressions and studies of the behavior of the principal. However, quite the opposite result showed up in the OCDQ. The score indicated a school with an extremely "closed" climate. The authors of the OCDQ, Halpin and Croft, have discussed other factors which sometimes take predominance over the influence of the principal in determining the organizational climate of a school.[1]

The OCDQ has eight sub-tests which are divided into two groups - - the first four describe characteristics of the staff, the last four describe the behavior of the principal (as perceived by the staff). Figure 3 below shows the sub-test scores of the four chosen schools.

Fig. 3. --Scores[a] achieved by the four selected schools on the sub-tests of the OCDQ.

SCHOOLS	SUB-TESTS[b]							
	1	2	3	4	5	6	7	8
	DIS	HIN	ESP	INT	ALO	PRD	THR	CON
School A	57	53	41	46	50	57	46	46
School B	49	51	44	50	41	53	55	51
School C	46	45	45	53	44	56	55	52
School D	47	50	49	50	51	56	44	49

[a] High scores indicate high degrees of the quality being tested.

[b] Disengagement, Hindrance, Esprit, Intimacy, Aloofness, Production-Emphasis, Thrust, Consideration. (See pp.26-27 for description of the sub-tests.)

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[1] Halpin and Croft, op. cit., pp. 86-88 (paraphrased). Even though most research literature on administration attributes the organizational climate to the influence of the principal, other strong factors operating in the school community, among the staff, from the central administration, and from professional organizations may over-balance the influence of the principal in creation of a given climate. The strength and direction of the influences need to be carefully evaluated. This is not a one-way street. The leader influences the behavior of group members, but the group members also influence the behavior of the leader. There are situations in which a group's inertia, hostility, or aggressiveness can immobilize a principal who in other circumstances might prove to be a highly effective leader. Such situations may also be created by societal and cross-cultural pressures.

The "Organizational Climate Description Questionnaire" yields a description of the principal's behavior as viewed by the staff. The principal himself, his superiors, and the community may see things quite differently. But regardless of the possible distortions of his behavior, as perceived by the staff, it is precisely in terms of this perception by the group that he must function as its leader.

When the final selection was completed, three of the four schools (Schools A, D, and C) were from among the control schools of the Great Cities Project. Only School B, which met all the required criteria according to the judgment of the four sources, was "virgin soil" - - a previously unresearched territory.

Descriptions of the Four Schools

School A had a "closed" organizational climate and was located in a "low" socioeconomic setting. The condition of the building was good. It was originally built in 1911, with new additions constructed in 1921, 1957, and 1961. Some classrooms were located in the basement. The main building was on the corner of two busy streets with entrance doors right next to the sidewalks. A "portable" unit of two classrooms nestled on the edge of the small playground. The school neighborhood was part of the inner city, a mixture of residential, commercial, and institutional structures including more than 300 independent businesses. A small portion included some very fine older homes.

Federal Census figures of 1960[1] of the tract which included the school area, gave the average family income as $4,705; average educational level of adults as 10.6 years of schooling, with 36.5 per cent completing eight years of school or less; the occupational distribution of the labor force was 18 per cent managerial and professional, 22 per cent laborers and service workers, 12 per cent unemployed, and the rest undetermined. According to school information, occupations of parents included household workers also, and people on public assistance who had never held jobs counted in "labor force" figures. Parts of the neighborhood were composed of large families on welfare and Aid to Dependent Children, other parts contained small families of upper income Negro professionals. PTA membership was over 400 and meetings were well attended, 75 - 250 at each.

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[1] United Community Services of Metropolitan Detroit, Social Characteristics of Communities in the Detroit Area (Detroit: United Community Services, 1963), p. 21 and 25.

Pupil enrollment consisted of 1541 children in grades kindergarten through six, with one class of mentally retarded youngsters. Student population was 99 per cent Negro. Academic achievement on (Spring, 1964) Iowa Tests of Basic Skills showed school averages for fourth and sixth grades 2.2 months and 5 months, respectively, below city-wide averages. The non-promotion rate was 2.2 per cent. Annual delinquency statistics of the Police Youth Bureau[1] for youth 16 years of age and under, cited 192 apprehensions in the school area. (Burglary 46, larceny 39, auto thefts 35, extortion 21, robbery 14, felonious assult 12, carrying concealed weapons 8, and miscellaneous items including 3 rapes, and 4 sex offenses.) The rate of incidence was fairly evenly distributed in each age bracket from 13 to 16 years, with 18 cases among the 10-12 year-olds.

School staff included the principal, two assistant principals, two secretaries, 43 full-time and 4 part-time teachers. This was an integrated staff - - half white and half Negro. There were eight teacher requests for transfer on file. The principal had been there four years.

Special features of the curriculum included participation in an experimental program of learning French, German, Spanish, health, science, and arithmetic from lessons on TV; pioneering an experimental non-graded primary unit of 19 classes; after-school classes in reading and arithmetic improvement; and a special class for the mentally retarded. The school also had a Junior Red Cross group and a Future Teachers Club.

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[1] Detroit Police Department Youth Bureau, Annual Report for 1963.

School B had an "open" organizational climate and was located in a "low" socioeconomic setting. The building was old, but well maintained and still in good condition. Built in 1892, with a new addition constructed in 1903, it was renovated several times (in 1914, 1956, 1959, and 1960). Some classrooms were located in the basement. The school neighborhood was in the inner city and included slum-type residential structures (slated for urban renewal), warehouses, and prosperous business areas on two important main streets.

The 1960 Federal Census data[1] for the tract including this school area, showed average annual family income was $4,379; average educational level of adults at 8.9 years of schooling, with 52.2 per cent completing eight years of school or less; the occupational distribution of the labor force was 8 per cent managerial and professional, 28.8 per cent laborers and service workers, 16.3 per cent unemployed, and the rest undetermined. According to school information parents were largely on public assistance, welfare and A.D.C., many had never held jobs nor been counted in the "labor force." P.T.A. membership was 210 with attendance at meetings ranging between 30 - 150.

Pupil enrollment was 623 children in grades kindergarten through six - - 99 per cent Negro. Academic achievement in the (Spring, 1964) Iowa Tests of Basic Skills placed the school averages of the fourth and sixth grades at 2.3 months and 6.7 months below city-wide averages. Nonpromotion rate was 1.7 per cent. Annual delinquency statistics of the Police Youth Bureau[2] for youth 16 years of age and under, cited 80 apprehensions in the school area. (Larceny 21, felonious assult 13, burglary 11, auto theft 11, extortion 10, robbery 5, simple assult 3, sex offenses 3, carrying concealed weapons 2, and stolen property 1.) Offender's ages ranged between 10-16 years with the highest incidence (21) at age 13.

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[1] United Community Services of Metropolitan Detroit, loc. cit.

[2] Detroit Police Department Youth Bureau, loc. cit.

School staff included the principal, an assistant principal, a secretary, 17 full-time and 3 part-time teachers. The staff was integrated - - half white and half Negro. Two teacher requests for transfer were on file. The principal had been there three years.

Special features of the curriculum included TV-taught French and German, an after-school reading improvement class; a special class for the mentally retarded; and adult classes in conversational English, sewing, and nutrition (sponsored by the P.T.A.). Co-curricular offerings included a Student Council, Math Club, and after-school physical recreation classes plus Boy Scout, Cub, and Brownie troops.

School C had an "open" organizational climate and was located in a "high" socioeconomic setting. The building was in excellent condition, built in 1948 with an addition put on in 1951. The school was in the fringe area of the city, surrounded by a large park and a primarily residential neighborhood, with a few businesses on one edge of its boundaries.

Federal Census figures of 1960[1] for the tract containing the school area, gave average annual family income as $8,413; average educational level of adults as 12.2 years of schooling, with 24.6 per cent completing 8 years of school or less; the occupational distribution of the labor force was 34.3 per cent managerial and professional, 6.7 per cent laborers and service workers, 4.1 per cent unemployed, and the rest undetermined.

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[1] United Community Services of Metropolitan Detroit, loc. cit.

School information listed occupations primarily as school teachers and administrators, businessmen, highly skilled tradesmen, some police and firemen. P.T.A. membership was about 450 with 75 - 100 attending regular meetings and over 400 coming to special performances.

Pupil enrollment was 860 all white youngsters in grades kindergarten through six. Pupil population was composed of 35 per cent Catholic, 25 per cent Jewish, and the others largely Protestant children. Academic achievement on the (Spring, 1964) Iowa Tests of Basic Skills showed school averages for fourth and sixth grades 7.6 months and 1 year 2.6 months respectively, above city-wide averages. The non-promotion rate was 1.4 per cent. Annual delinquency statistics of the Police Youth Bureau[1] for youth 16 years of age and under cited 26 apprehensions in the school area (auto thefts 11, larceny 5, extortion 5, burglary 4, and felonious assult 1). Offenders ranged in age from two 13 year-olds to fourteen 16 year-olds.

School staff included the principal, an assistant principal, a secretary, 25 full-time and 4 part-time teachers. No teacher requests for transfers were on file. The principal had been there nine years.

Special features of the curriculum included regular instruction in Spanish, after-school "special ability" classes in science and literature, and classes in reading and arithmetic improvement. The P.T.A. sponsored Boy Scout, Girl Scout, Cub and Brownie troops, and physical recreation was provided after school hours by the Department of Parks and Recreation.

School D had a "closed" organizational climate and was located in a "high" socioeconomic setting. The building was in excellent condition, constructed in 1945 with a new unit added in 1949. The school boundaries enclosed a primarily residential section in the fringe area of the city with a few businesses on two busy streets at the outer edges.

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[1] Detroit Police Department Youth Bureau, loc. cit.

According to 1960 Federal Census[1] figures for the tract which included this school area, average annual family income in the area was $7,260; average educational level of adults was 10 years of schooling with 41 per cent completing eight years of school or less; the occupational distribution of the labor force was 14 per cent managerial and professional, 12 per cent laborers and service workers, 4 per cent unemployed, and the rest undetermined. School information listed parents employed as policemen, firemen, and highly skilled tradesmen. P.T.A. membership ranged between 150 - 200 with average attendance at meetings estimated between 7 - 30.

Pupil enrollment consisted of 524 all white youngsters in regular grades, kindergarten through six. About 75 per cent were Catholic, the others largely Protestant. Academic achievement on the Iowa Tests of Basic Skills, of Spring 1964, showed school averages for the fourth and sixth grades approximately a half year above city-wide averages. The nonpromotion rate was one per cent. Annual delinquency statistics of the Police Youth Bureau[2] for youth 16 years of age and under, cited 24 apprehensions, of 15 and 16 year-olds only, in the school area, with auto thefts the predominant type of offense. (Auto thefts 8, extortion 7, larceny 4, burglary 2, and 1 each of larceny, carrying concealed weapons, and gambling.)

School staff included the principal, an assistant principal, one secretary, 12 full-time and 3 part-time teachers (one Negro and all the rest white). There was one teacher request for transfer on file. The principal had been there 19 years.

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[1] United Community Services of Metropolitan Detroit, loc. cit.

[2] Detroit Police Department Youth Bureau, loc. cit.

Special features of the curriculum included "live" instruction in Spanish, and after-school classes in reading and arithmetic improvement. Science, Glee, and Future Teachers Clubs composed part of the co-curricular offerings. After-school Scout troops for both boys and girls, and physical recreation were provided by the P.T.A. and Department of Parks and Recreation.

The Pilot Run

Concurrently, while this selection process was underway, a pilot run was conducted in two qualified, but non-participating, schools in early January, 1964. One school was in a "low" socioeconomic area with a relatively "open" organizational climate, the other one in a "high" socioeconomic setting with a "closed" climate. The purpose of the pilot run was fourfold: (1) to help determine the electronic equipment configuration and technical personnel needed in each location; (2) to help clarify and specify the exact procedures to be followed in the videotape recordings; (3) to provide sample videotapes to be used in developing suitable classifications of problems, initiators, and coding grids; and (4) to supply videotapes to be used in training assistant researchers and coders. In addition, information was needed concerning the length of time it would take for school personnel to become accustomed to the equipment in the office, and to overcome the tension of feeling that they were being watched constantly. Knowledge of the extent to which they could become oblivious to the presence of the researchers in the mobile truck unit outside the

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building was also needed.

During the six-day trial run it became evident that audio rather than video aspects were to present the greatest difficulties. Noiseless typewriters were rented for the school offices. A total of seven separate microphones were specified for each office set-up. Four stationary multi-directional microphones were installed, one each at the main office counter, on or near the principal's desk, and on the desks of the assistant principal and secretary. In addition, three radio microphones were utilized in each school accompanied by three radio receivers. These were worn by the principal, assistant principal and secretary. The wireless radio microphones were relatively inconspicuous and permitted complete freedom of movement for the wearers, at the same time providing audio coverage up to one-hundred feet beyond the office.

An audio-technician was needed in the truck to manipulate the seven-channel audio-mixer which made it possible to tune in instantly on conversations on any one or more of the seven different microphones. The selection of the conversations to be recorded was done at the discretion of an assistant researcher ("camera-coder") present at all times in the mobile unit at each location. A "swing-shift" additional technician was provided to assist with repairs and emergencies, dividing his time, as needed, between the two locations. Telephones were installed in each of the trucks, and at the playback headquarters at the Wayne State University, College of Education TV research laboratory to facilitate the coordination of emergency operations.

Two miniature transistorized video-cameras were installed in each school office complex. A stationary one was placed in the principal's private office in such a position that all activity there could be covered and watched. Another video-camera equipped with a pan and tilt mechanism and Zoomar lens was mounted in the main outer office, placed at such an angle that the researcher in the mobile unit operating remote controls could scan the scene, cover all action, and zoom in for closeups at will.

Both cameras were in operation, simultaneously and continuously. The researcher-coder was able to watch all action in both offices on adjacent twin monitor sets in the truck, and by means of a simple switching unit was able to alternate the recording done from one camera to another. A single video-tape recorder (a Precision Instrument PI-3V) recorded the sequences selected by the researcher-coder from the two constantly operating video-cameras. The same researcher-coder kept up a running account of activities in the office by brief annotations of incidents to be coded later.

In order to cover the entire school day, it was decided that recording should begin one-half hour before the arrival bell for children, and continue one-half hour after the dismissal bell - - from 8:15 a.m. to 3:45 p.m., with an hour off for lunch - - a total of 6½ hours of videotaping in each school daily.

Operations in two school locations at the same time placed heavy daily demand on the supply of costly videotape. Rapid turnover in coding the tapes was essential. A playback station was established at the TV research laboratory of the College of Education, Wayne State University. One technician was to operate two P.I. videotape recorders in the control room, playing back tapes made in the different schools on previous days. Maximum lag between taping and coding was not to exceed five days. Two coders, wearing earphones, were able to see and hear separate tapes on twin monitor sets in a single viewing room. By utilizing four P.I. videotape recorders simultaneously - - one on each mobile unit gathering data at the two school locations, and two for coders at the playback station - - the entire project of 450 hours of recording could be completed on a 210 hour supply of videotape. A complete list of the technical equipment required for this project appears as Figure 10 in Appendix A.[1]

Training of Coders and Determining Problem-Initiator Classifications

Thirteen assistant-researchers and coders were recruited, employed and trained between February 3 and 24, 1964. Personnel included college of education instructors, principals, teachers, doctoral candidates and other graduate students. A series of orientation meetings and intensive training-practice sessions were held in which the purposes, procedures and ethical considerations of the research project were explained. Observance of absolute security measures was made a condition for continued employment. The danger of any violation of confidence in discussing incidents viewed on the tapes was stressed. The fact that this study could be stopped in mid-stream and all future research of similar nature be placed in jeopardy should any damaging judgments and remarks be carelessly uttered, was made emphatically clear. No breaches of this code of ethics were reported at any time.

Viewed "rushes" of sample videotapes from the pilot run revealed that this media afforded such comprehensive and detailed coverage of the varied activities of all the personnel in the school office that, at times, a very rapid pace had to be maintained in annotating for coding. Therefore, the definition of a "problem" had to be spelled out so simply and clearly that quick and certain identification would be possible. Judgmental aspects were to be avoided in order to maintain a maximum degree of objectivity. Identification of "problems" was not to depend on evaluations of their seriousness, magnitude, or positive-negative valences. Reduced to the lowest common denominator, a "problem" was defined as any verbal interaction between two or more people on school-related topics, occurring in the school office. (Mere chit chat was excluded.)[1] The chief duty of coders was to identify the topic in terms of the problem-type classifications, and to document who the person was that first introduced it - - the "initiator." For every separate problem there was to be an initiator. Once these two elements were identified, the coder was free to attend to other "problems." Each simple problem could be coded only once. However, a complex situation could be fragmented into a series of discreet problems.

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[1] Consulting engineers of General Television Network claimed that the videotape and equipment demands of this study exceeded those of any other previously known research project using such media.

Videotapes made in the pilot run were used to test the comprehensiveness and mutual exclusiveness of previously constructed classifications of types of problems and initiators in a sample coding grid. These classifications were cooperatively developed, modified, and clarified with the coders until their feasibility was proven by a high degree of agreement and reliability.

Eighteen classifications of types of problems (coded by numeric symbols, 1-18), and twenty-one classifications of types of initiators (coded by alphabetic symbols, A-T, with X for the unknown) were postulated.

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[1] See Figures 11 and 13 in Appendix A for more detailed instructions to coders and assistant-researchers (camera-coders).

Fig. 4. --Types of Problems[a]

1. Administrative Organization
2. Personnel
3. Administrative Emergencies
4. Pupil Transfers and Enrollment
5. Pupil Whereabouts Accounting
6. Pupil Property Accounting
7. Pupil Accidents and Emergency Sickness
8. Pupil Classroom Disturbance
9. Misbehavior - School Building and Grounds
10. Pupil Neighborhood Disturbance
11. Academic Achievement
12. Co-Curricular Activities
13. Auxiliary Service Problems
14. Pupil Health
15. Pupil Welfare
16. School Community Relations
17. Physical Plant Facilities
18. In-Service, Professional Growth

[a] Unknown problems (topics) were coded into Type (3) Administrative Emergencies and a separate accounting is made of them. Detailed descriptions of the kinds of incidents included under each type of problem are in Figure 14 in Appendix A.

The classifications of problems into eighteen types involved some very deliberate "break-downs" in order to achieve a more refined description of conditions in each school. The Delinquency Control Training Center of Wayne State University was interested in having a clear picture of the patterns of pupil misbehavior in the school environment. The contention was that there could be practical significance in knowing where the acts of disturbance took place. Consequently, four distinct classifications of this problem area resulted: Pupil Whereabouts Accounting (5), Pupil Classroom Disturbance (8), Pupil Misbehavior around School Building and Grounds (9), and Pupil Neighborhood Disturbance (10). As it turned out, these distinctions proved to point out significant differences between schools in the study. Particular value was also attached to distinguishing between routine Pupil Health (14) concerns and Pupil Accidents and Emergency Sickness (7). Three other types of pupil problems: Pupil Welfare (15), Pupil Transfers and Enrollment (4) and Pupil Property Accounting (6), brought the number of pupil-oriented type problem classifications to nine - - one half of the total number. This study aspires to give a more functional description of the effects of the two variables, socioeconomic setting and organizational climate, on the learning environment by focusing attention on what happens to and with pupils.

Fig. 5. --Types of Initiators[a]

(A) Principal
(B) Assistant Principals
(C) Secretaries
(D) Teachers
(E) Pupils
(F) Parents
(G) Citizens
(H) Visiting Teacher
(I) Attendance Agent
(J) Nurse and Health Department Personnel
(K) Custodial and Maintenance Personnel
(L) Other School Service Personnel
(M) Supervisors
(N) District Administration Personnel
(O) Central Administration Personnel
(P) Auxiliary Service Personnel
(Q) Personnel from other Schools
(R) Social Welfare Agency Personnel
(S) Public Services and Community Agency Personnel
(T) Police
(X) Unknown

[a] See Figure 15 in Appendix A for more detailed descriptions of initiator classifications.

Twenty-one classifications of types of initiators may, at first, seem unnecessarily cumbersome. However, one of the hoped-for results of this study, was to describe present somewhat standardized patterns of personnel staffing in elementary schools of large cities, in such detail that their utilitarian appropriateness might be determined. By ascertaining the amount of activity by the various types of initiators, and comparing that data with differences in the kinds of problems which achieved prominence under the effects associated with the two variables being investigated, perhaps the need for variety and specific kinds of changes in staffing patterns might be indicated and described.[1]

A coding grid of 18 X 21 cells was found to be too complicated for on-the-spot coding as tapes were being viewed. Coders found it more expedient to jot down abbreviated annotations wherein the topic and interactors were identified, to be coded later by the numeric and alphabetic symbols. A tally of these symbols was consolidated on the coding grids for each individual 60 or 90-minute videotape. Annotations[2] and tally sheets[3] were labeled by the school name, tape number, date, time of day, and coders' name.

The coder practice-training sessions consisted of everyone viewing the same pilot run tapes, annotating and coding them individually, then meeting to compare and analyze results. Differences in opinion were thoroughly discussed and explored until consensus was reached, sometimes arbitrarily, as to how specific incidents should be classified.[4]

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[1] Both classifications of problems and initiators were screened and approved by the four participating principals before they were finally accepted.

[2] Figure 16 in Appendix A is a sample annotation of a single tape.

[3] Figure 17 in Appendix A is a sample tally sheet.

[4] Samples of such additional clarifications of classifications are in Figure 18 in Appendix A.

Reliability and Adequacy of Sampling

During these numerous practice-coding sessions the reliability rate, or per cent of agreement, rose from 28 to 79 - - a figure considered high enough to be acceptable for beginning coding of the actual research data.

A running check was made of reliability rates between the two separate codings of each videotape during the eight weeks of this study. Detected discrepancies were clarified immediately. Final reliability rates for the total data were 87 per cent for problems and 80 per cent for initiators.

Adequacy of sampling was determined by separating daily videotapes from each school into two groups - - those of odd and even days. Videotaping and the viewing of events was to be continued until both groups of samples began to show stability (duplication) in the type of data being received. Data stabilized within two weeks in each location. However, sampling was continued for an additional four days in each school.

During the pilot run, the rapid physical and psychological adjustment to the media by the school staffs was amazing to behold, even though it was not unanticipated. Dr. Bantel, consulting psychologist to the project, had predicted this phenomenon, from experience gained in the Teacher Education Project. Observers had discovered that the operation of mechanical equipment, in and of itself, was so impersonal that people quickly became oblivious to it. Less contamination of the authenticity of behavior because of external influence, was detected when such media was used, than when human observers were utilized. This prediction proved to be right.

Within half a day, conversation in the pilot school offices showed unmistakable evidence that personnel were forgetting completely, at times, that all activities were being watched and recorded. After a day and a half, business was carried on as usual, with apparently very little attention being paid to the research project. Visitors to the offices generally were completely unaware that the equipment in the offices was in operation. Very rarely did people notice or inquire about the presence of the microphones and cameras. This aspect never became a problem.

In order to minimize the effects that possibly may have existed, unbroken continuity was sought in recording in the four schools. A tentative three-week video-taping schedule (matching each school against the other) was set up in blocks of two-week and one-week periods in each school. A consecutive three-week period was possible in only one school, this happened to be School A.

Data Gathering

The video-tape recording began in the selected schools on February 24, and continued over a six-week period until March 10, 1964. The schedule called for matching each of the four schools against each other in pairs, as shown below.

Fig. 6. --Project Recording Schedule

First Week	February	24-28	Schools D and A
Second Week	March	2-6	Schools B and A
Third Week	March	9-13[a]	Schools C and A
Fourth Week	March	16-20	Schools C and D
Fifth Week	March	23-26[b]	Schools B and D
Sixth Week	April	6-10	Schools B and C

[a] March 11 was omitted because it was Institute Day and schools were not in session.

[b] This was a four-day week because of Good Friday, followed by a one-week Easter vacation.

Identical configurations of equipment and personnel operated in each of the two locations.[1] Installations were made during the week-ends. Recording was carried on 6½ hours daily in each school, from 8:15 a.m. to 3:45 p.m. with a one-hour lunch break at noon.

Coding at the playback station was set up in three-hour time blocks[2], stretching from 8:00 a.m. to 9:00 p.m. daily. The coding schedule began three days after recording was initiated, and continued for one week after the recording schedule ended - - until April 17. Within that time, a grand total of 12,062 problems were identified and classified in the project schools.

Some of the playback time was used by the principal investigators to view and select recommended tapes and short incidents to be saved from erasure. Thirty-seven hours of recorded tape was preserved for various future uses: one entire day from each of the four schools for possible future research; individual tapes for future showings at professional meetings; and selected incidents which were dubbed on new tape to be used as authentic material for re-enactment on films usable for teaching purposes in preparation and in-service education of administrators.

Data Processing and Statistical Procedures

The coded data were punched and verified on IBM cards, and processed on computers at the Wayne State University Computing Center.

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[1] See pp. 48-50 for description of equipment and personnel.

[2] According to the advice of Dr. Edward Bantel based on research in the TEP project, and substantiated by experience in the pilot run of this study, three hours of viewing was the maximum time allowable for maintaining accuracy and efficiency in coding, and avoiding loss of data because of the fatigue factor.

The raw data of this study were purely ennumerative of the occurrences of eighteen types of problems and twenty-one types of persons who initiated the problems as observed during fourteen days in each of four Detroit elementary school offices. Since no known norms exist for the expected number of occurrences of such problems in school offices, a nonparametric statistical test, the χ^2 test, was chosen to process the data. The χ^2 test is a "distribution free" test since it does not assume any given kind of distribution of frequencies within the population, e.g., a normally distributed population. It is merely a "goodness-of-fit" type of test which compares some observed sample distribution with a postulated theoretical frequency distribution based on the null hypothesis (Ho). The null hypothesis states the proportion of responses expected to fall into each of the categories in the presumed population. The χ^2 technique tests whether observed frequencies are sufficiently close to the expected ones to be likely to have occurred merely by chance under the Ho, or whether a significant difference exists between the observed and expected frequencies enabling the researcher to reject the Ho of "no difference." The critical values of chi square used in this study were found in Siegel's statistical table[1] which give the associated probabilities of occurrence (levels of significance) according to the chi square distributions determined by the number of degrees of freedom (df). The size of df reflects the number of observations that are free to vary after certain restrictions have been placed on the data. For example, in this study most χ^2's were computed with 1 degree of freedom: two categories with a fixed number of observations. As soon as the number of cases in one category was ascertained, the number in the other was determined.

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[1] Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Co., Inc., 1956), p. 249.

The formula used for computing χ^2 was:

$$\chi^2 = \sum_{i=1}^{k} \frac{(fo - fe)^2}{fe}$$

fo = observed frequencies

fe = expected frequencies

In order to make the comparisons between the observed and expected frequencies for each type of problem and each type of initiator, the expected frequencies had to be specified, based on the null hypothesis. Had the four schools of this study been of equal size, the observed frequencies would have been summed and divided equally to arrive at expected frequencies of no difference between schools (Ho). Inasmuch as the four schools were of various sizes, however, such an equal division would have resulted in unrealistic expected frequencies. Therefore, an enrollment factor was introduced to weight the expected frequencies for each school.

For example: In Table I the sum of the total observed frequencies of problems in Schools B and C were summed and then divided according to the per cent of total enrollment found in each school, to arrive at the expected frequencies for each of the categories, "High" and "Low," as shown in Figure 7 on the following page.

In utilizing the enrollment weighting factor an assumption was made that the number of problems brought to school offices was directly proportional to the enrollment of the school. This was done with full realization that the assumption did not hold true to the same degree in the case of every type of problem and initiator. Yet no single type of problem or initiator could be completely absolved from its influence.

In the absence of better measures, and since this weighting factor is still the most common device used by school systems to equate schools of various sizes in allocating personnel and services to deal with these problems and initiators, its use seemed justified.

Fig. 7. --Method of using the enrollment weighting factor to arrive at expected frequencies.

ITEM	Socioeconomic Setting		TOTAL
	HIGH School C	LOW School B	School C & B
Enrollment	860	623	1483
Weighting Factor	$\frac{860}{1483}$ = 58%	$\frac{623}{1483}$ = 42%	100%
Observed Frequencies	2986	2662	5648
Expected Frequencies	5648 x.58 3275	5648 x.42 2373	5648

Weighting factors were determined by this method for each separate comparison between schools. The respective enrollments of the four schools were:
School A = 1541
School B = 623
School C = 860
School D = 524

It was noticeable that in using the enrollment weighting factor the relationship between observed and expected frequencies seemed to favor the smaller schools by putting their observed frequencies on the plus side. This phenomenon tended to indicate a fact, readily acceptable to common sense, namely, that certain basic kinds and certain basic numbers of problems exist in every school situation regardless of the size of enrollment. The degree of skew in data because of this element was not determined.

The data of this study were also treated in terms of internal per cent distribution of problems and initiators in the four schools. This was the only other considered alternative to the enrollment factor weighting device for equating schools of various sizes. It also provided another way of viewing differences between schools.

However, in converting the 12,062 total observed raw frequencies into per cent data, sample size was cut down to 200 units (1100 per cent for each of the schools, or combinations of schools, being compared). It was determined that the per cent unit of measurement was too gross in nature to show existing differences with sufficient clarity (each per cent unit represented up to 60 actual occurrences). The decision was reached to compute the χ^2 values of these data in terms of one-tenth per cent so that sample size was increased to 2,000 units - - more than the actual 12,062 cases observed.

The decision to deflate rather than inflate sample size in the per cent tables expressed a preference to understate rather than overstate significant differences. Using units of one-tenth per cent in the computations of χ^2 values still afforded only one-sixth of the precision of the raw frequency data. Hence, many of the types of problems and initiators which appeared significantly different in terms of the variables of this study in the raw and weighted frequency tables were lost into non-significance in the more conservative internal per cent distribution tables. These tables are presented and analyzed in the following section on findings.

Appendix B includes tables showing the actual raw frequencies for the total array of types of problems and initiators in the four schools. Tables presenting χ^2 values computed from the actual untreated raw data for the problems and initiators in schools combined according to the variables "high," "low," "open," and "closed" are also included, with no attempt made to equate schools by size. These may be useful in estimating differences in the amount of responsibility of principals assigned to schools of various dimensions.

CHAPTER IV

ANALYSIS OF DATA

A total of 12,062 problems, each with an initiator, was extracted from the accumulated videotapes of fourteen days of recording in each of the four elementary school offices. This was considered an adequate sample size for this study, since the odd and even day dividions of the data had stabilized. Statistical tables, in this chapter, present the data in three forms, i.e., in terms of raw frequencies, frequencies weighted by the enrollment factor, and according to the internal per cent distribution of problems within the schools. The organization of the tables is set up for examination of the data with regard to the three hypotheses: (1) the number of problems, (2) the types of problems, and (3) the types of initiators, as affected by the two variables, socioeconomic setting and organizational climate.

The most significant tables are presented first, in which data were combined from two schools identified and paired in terms of "high" or "low" socioeconomic setting, and "open" or "closed" organizational climate. The null hypotheses were tested against the data in these tables. The tables which follow later, present comparisons of the individual four schools, and point out some unique features in each one.

Number of Problems - Combined and Individual Schools

Table I reports the comparison of the total numbers of problems brought into the offices of the two schools in "high" socioeconomic settings (Schools C and D) with those of the two schools in "low" settings (Schools A and B).

> The data seem to show a strong positive association between "high" socioeconomic setting and large numbers of problems.

The χ^2 value of 67.79 is very highly significant at the .001 level of confidence in the comparison between the combined "high" schools (C and D) with the combined "low" schools (A and B), indicating the existence of great difference.

However, in contrasting individual School B with School C the data contradict the general finding with a χ^2 value of 60.67 significant at the .001 level. A similar contradiction is evident in the comparison between School B and School D, but with a χ^2 value of 3.75, which is too low to be statistically significant in this study - - the region of rejection being set at the .02 level with a minimum critical chi square value of 5.41 (degrees of freedom 1).

Possible explanations of such contradiction, meriting consideration, may be the degree of verbalization which was characteristic of the office staff, or differences in the time-consuming nature of the problems brought to the offices. A "problem" in this study was defined as a spoken interaction between two or more people on some particular topic. Hence, a more talkative staff discussing various problems may have accounted for more frequencies being recorded in one office during comparable period of relative silence in other offices.

> In schools with few pupil-behavior problems office staff had opportunity to discuss a great variety of problems in the equivalent time taken by one serious behavior case in the schools having many pupil problems.

The general inference of a close relationship between "high" socioeconomic setting and large numbers of problems is supported by the comparisons of individual schools, C with A, and D with A. Extremely large χ^2 values of 83.68 and 246.33 appear respectively. These are well above the critical chi-square value of 10.83 needed at the .001 level of significance.

According to this evidence:

> The null hypothesis (I-A) was rejected at the .001 level of confidence, and the alternative statistical hypothesis was accepted that: the socioeconomic setting of the school affects the number of problems brought to the school office.

In Table II, the total numbers of problems brought into school offices of two schools with "open" organizational climates (Schools B and C) are compared with those of two schools with "closed" climates (Schools A and D). The data show a χ^2 value of 115.27 in the comparison of the combined "open" schools with the combined "closed" schools. The differences appear to be very highly significant.

> The data seem to infer a very positive relationship between "open" organizational climate and large numbers of problems.

The existence of large numbers of problems in and of themselves, does not imply difficulties in the school, since "problems," as defined in this study, carried no connotations of being positive or negative in nature.

> Large numbers of "problems" merely denote that a large variety of school concerns were discussed with great frequency, however briefly.

While the comparison between individual Schools C and D produced a contradictory result, the other three comparisons of single schools seemed to substantiate the general inference of close association between "open" climate and many problems being brought to the office.

TABLE I

VALUES OF χ^2 FOR TOTAL NUMBER OF PROBLEMS IN TWO SCHOOLS IN A HIGH AND TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING

Schools	High Schools C and D	Low Schools A and B	High Frequencies Obs.	High Frequencies Exp.[b]	Low Frequencies Obs.	Low Frequencies Exp.	χ^2[a]	Levels of Significance
B vs. C	-	+	2986	3275	2662	2373	60.67	.001
B vs. D	-	+	2145	2212	2662	2595	3.75	---
A vs. C	+	-	2986	2612	4269	4642	83.68	.001
A vs. D	+	-	2145	1601	4269	4812	246.33	.001
A+B vs. C+D	+	-	5131	4704	6931	7358	67.79	.001

[a] Enrollment factor weightings: B 42% vs. C 58%; B 54% vs. D 46%; A 64% vs. C 36%; A 75% vs. D 25%; A+B 61% vs. C+D 39%

Degrees of freedom 1

[b] Observed frequencies, expected frequencies

TABLE II

VALUES OF χ^2 FOR TOTAL NUMBER OF PROBLEMS IN TWO SCHOOLS WITH OPEN AND TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES

Schools	Open Schools B and C	Closed Schools A and D	Open Frequencies[b]		Closed Frequencies		χ^{2}[a]	Levels of Significance
			Obs.	Exp.	Obs.	Exp.		
B vs. D	+	-	2662	2595	2145	2212	3.75	---
A vs. B	+	-	2662	2011	4269	4919	296.89	.001
A vs. C	+	-	2986	2612	4269	4642	83.68	.001
C vs. D	-	+	2986	3181	2145	1950	31.45	.001
B+C vs. A+D	+	-	5648	5066	6414	6996	115.27	.001

[a] Enrollment factor weightings: B 54% vs. D 46%; A 71% vs. B 29%; A 64% vs C 36%; C 62% vs. D 38%;. B+C 42% vs. D+A 58%

Degrees of freedom 1

Another conclusion which may be drawn from the data, is that:

> Organizational climate seemed to have been more of a determinant of the total numbers of problems brought to school offices than socioeconomic setting.

The χ^2 value obtained in contrasting combined schools on the basis of "high" or "low" socioeconomic setting was 67.69, (see Table I), as compared with a χ^2 value of 115.27 in this table, which compares the same four schools by climate.

According to this evidence:

> The null hypothesis (II-A) was rejected at the .001 level of confidence, and the alternative statistical hypothesis was accepted that: the organizational climate of the school affects the number of problems brought to the school office.

Types of Problems - Combined Schools

Table III presents comparisons, in terms of raw frequency data, of the types and number of problems brought to the offices of schools combined with regard to both variables. The untreated raw frequencies disregard differences in the sizes of the schools. Notice the extremely large χ^2 values, at the .01 and .001 levels of confidence, which indicate highly significant differences in every one of the 18 types of problems, between schools located in the "high" versus the "low" socioeconomic settings. Ten, of the 18 types, showed significant differences, also, between the schools with "open" versus "closed" organizational climates.

In terms of the χ^2 values of the total number of problems, and the entire array of types of problems, highly significant differences may be associated with the effects of both variables. Larger χ^2 values infer that socioeconomic setting, rather than organizational climate, was more of a determinant of the differences shown.

TABLE III

χ^2 FOR RAW FREQUENCIES OF PROBLEMS IN SCHOOLS COMBINED IN TERMS OF THE VARIABLES HIGH AND LOW SOCIOECONOMIC SETTING, AND OPEN AND CLOSED ORGANIZATIONAL CLIMATE

	Types of Problems	High Schools C + D	Low Schools A + B	χ^2[a]	Lev. of Sig.[b]	Open Schools B + C	Closed Schools A + D	χ^2[a]	Lev. of Sig.[b]
(1)	Administrative Organization	988	1264	33.83	.001	1078	1174	4.09	.05
(2)	Personnel Problems	284	388	16.14	.001	317	354	2.04	---
(3)	Administrative Emergencies[c]	1054	1817	203.38	.001	1349	1521	10.31	.01
(4)	Pupil Transfers and Enrollment	66	197	65.25	.001	92	171	23.73	.001
(5)	Pupil Whereabouts Accounting	96	202	37.70	.001	165	133	3.44	---
(6)	Pupil Property Accounting	144	81	17.64	.001	126	99	3.24	---
(7)	Pupil Accidents & Emergency Sickness	285	399	19.00	.001	366	318	3.37	---
(8)	Pupil Classroom Disturbance	91	518	299.39	.001	180	429	101.81	.001
(9)	Misbehavior School Bldg. & Grounds	130	372	116.66	.001	180	322	40.18	.001
(10)	Pupil Neighborhood Disturbance	53	123	27.84	.001	60	116	17.82	.001
(11)	Academic Achievement	266	132	45.12	.001	153	245	21.27	.001
(12)	Co-Curricular Activities	197	72	58.09	.001	164	105	12.94	.001
(13)	Auxiliary Service Problems	106	147	6.64	.001	134	119	0.89	---
(14)	Pupil Health	125	227	29.55	.001	185	167	0.92	---
(15)	Pupil Welfare	71	138	21.48	.001	135	74	17.80	.001
(16)	School-Community Relations	640	421	45.20	.001	524	537	0.16	---
(17)	Physical Plant Facilities	299	96	104.33	.001	151	244	21.90	.001
(18)	In-Service, Professional Growth	237	337	17.42	.001	289	286	0.03	---
	Total Number of Problems	5131	6931	268.62	.001	5648	6414	48.64	.001
	χ^2 Value for Total Array, Degrees of Freedom 17			1164.66	.001			283.94	.001

[a] Degrees of Freedom 1 (for each type of problem, and the comparison of totals)

[b] Only levels of significance between .05 and .001 are reported

[c] Includes unidentified problems: High 288, Low 802, Open 453, Closed 637

According to this evidence:

> Null hypotheses I-B and II-B may be rejected, at the .001 level of confidence, and the alternative statistical hypotheses accepted that: both the socioeconomic setting and the organizational climate of the school affect the types of problems brought to the school office.

Table IV shows the internal per cent distribution of the various types of problems in rank order of magnitude in the two schools in the "high" and the two schools in the "low" socioeconomic settings.

> Administrative Emergencies (3) and Administrative Organization (1) usurped the first and second positions in the rank order in the schools in both settings.

The greatest difference in rank order occurred in regard to Physical Plant Facilities (17) which was fourth in the "high" settings versus seventeenth in the "low." Problems of this type took four and one-half times as much of the total distribution in the "high" setting than in the "low" setting schools.

Pupil Classroom Disturbances (8) appeared third in rank in the "low" settings compared with fifteenth in rank in the "high" setting schools. This type of problem took over four times as much of the total distribution in the "low" setting than in the "high" setting schools.

Co-Curricular Activities (12) took over three times as great a share of the total distribution in the "high" setting than in the "low" setting schools. These problems were ninth in rank in the "high" versus eighteenth in the "low" setting schools.

Problems concerning School-Community Relations (16) though close in rank order (third and fourth) took over twice as much of the total distribution in the "high" as compared with the "low" settings.

Other types of problems which showed noticeable differences in rank order and which took more than double the share of the total distribution in the schools in the "high" versus "low" settings were: Academic Achievement (11), and Pupil Property Accounting (6).

Problems showing considerable differences in rank order and taking double the share of the total distribution in the "low," rather than the "high" settings, were Pupil Transfers and Enrollment (4), and Misbehavior around School Building and Grounds (9).

Table V shows the internal per cent distribution of the various types of problems in rank order of magnitude in the two schools with "open" versus the two schools with "closed" organizational climates. The largest differences in rank order were in Co-Curricular Activities (12), tenth in the "open" and sixteenth in the "closed," and Pupil Health problems (14), seventh in the "open" and twelfth in the "closed." Pupil Transfers and Enrollment problems (4) appeared eleventh in the "closed" and seventeenth in the "open" climate schools.

In comparing Table IV with Table V, less divergence in rank order was noticeable when schools were contrasted by climate rather than socioeconomic setting. The actual number of points of variance in rank order of types totalled 72 when schools were contrasted by socioeconomic setting, and only 42 when contrasted by organizational climate. Differences in percentages, also, were much smaller in contrasting climates than in contrasting socioeconomic settings. Only Pupil Classroom Disturbances (8) claimed twice as much of the total distribution (6.7%) in the "closed" versus (3.2%) in the "open" climate schools. Another point to note was that:

> Similarities in rank order of problem types appeared to be slightly closer between "low" and "closed" than between "high" and "open."

TABLE IV

RANK ORDER OF INTERNAL PER CENT DISTRIBUTION OF PROBLEMS IN TWO SCHOOLS IN A HIGH AND TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING

High				Low			
Schools C + D				Schools A + B			
Rank	Cat.	Types of Problems	Per Cent	Rank	Cat.	Types of Problems	Per Cent
1	(3)	Administrative Emergencies	20.5	1	(3)	Administrative Emergencies	26.3
2	(1)	Administrative Organization	19.3	2	(1)	Administrative Organization	18.2
3	(16)	School-Community Relations	12.5	3	(8)	Pupil Classroom Disturbance	7.5
4	(17)	Physical Plant Facilities	5.8	4	(16)	School-Community Relations	6.1
5	(7)	Pupil Accidents & Emergency Sickness	5.6	5	(7)	Pupil Accidents & Emergency Sickness	5.7
6	(2)	Personnel Problems	5.5	6	(9)	Misbehavior School Bldg. & Grounds	5.5
7	(11)	Academic Achievement	5.1	7	(2)	Personnel Problems	5.5
8	(18)	In-Service, Professional Growth	4.7	8	(18)	In-Service, Professional Growth	4.9
9	(12)	Co-Curricular Activities	3.8	9	(14)	Pupil Health	3.2
10	(6)	Pupil Property Accounting	2.8	10	(5)	Pupil Whereabouts Accounting	3.0
11	(9)	Misbehavior School Bldg. & Grounds	2.5	11	(4)	Pupil Transfers and Enrollment	2.9
12	(14)	Pupil Health	2.4	12	(13)	Auxiliary Service Problems	2.1
13	(13)	Auxiliary Service Problems	2.1	13	(11)	Academic Achievement	2.0
14	(5)	Pupil Whereabouts Accounting	1.9	14	(10)	Pupil Neighborhood Disturbance	1.8
15	(8)	Pupil Classroom Disturbance	1.8	15	(15)	Pupil Welfare	1.6
16	(4)	Pupil Transfers and Enrollment	1.3	16	(6)	Pupil Property Accounting	1.3
17	(15)	Pupil Welfare	1.3	17	(17)	Physical Plant Facilities	1.3
18	(10)	Pupil Neighborhood Disturbance	1.1	18	(12)	Co-Curricular Activities	1.1
			100.0				100.0

TABLE V

RANK ORDER OF INTERNAL PER CENT DISTRIBUTION OF PROBLEMS IN TWO SCHOOLS WITH OPEN AND TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES

Open				Closed			
Schools B + C				Schools A + D			
Rank	Cat.	Types of Problems	Per Cent	Rank	Cat.	Types of Problems	Per Cent
1	(3)	Administrative Emergencies	23.8	1	(3)	Administrative Emergencies	23.7
2	(1)	Administrative Organization	19.1	2	(1)	Administrative Organization	18.3
3	(16)	School-Community Relations	9.3	3	(16)	School-Community Relations	8.4
4	(7)	Pupil Accidents & Emergency Sickness	6.5	4	(8)	Pupil Classroom Disturbance	6.7
5	(2)	Personnel Problems	5.6	5	(2)	Personnel Problems	5.5
6	(18)	In-Service, Professional Growth	5.2	6	(7)	Pupil Accidents & Emergency Sickness	5.0
7	(14)	Pupil Health	3.3	7	(9)	Misbehavior School Bldg. & Grounds	5.0
8	(8)	Pupil Classroom Disturbance	3.2	8	(18)	In-Service, Professional Growth	4.5
9	(9)	Misbehavior School Bldg. & Grounds	3.2	9	(11)	Academic Achievement	3.8
10	(12)	Co-Curricular Activities	2.9	10	(17)	Physical Plant Facilities	3.8
11	(11)	Academic Achievement	2.8	11	(4)	Pupil Transfers & Enrollment	2.7
12	(5)	Pupil Whereabouts Accounting	2.7	12	(14)	Pupil Health	2.6
13	(17)	Physical Plant Facilities	2.7	13	(5)	Pupil Whereabouts Accounting	2.1
14	(13)	Auxiliary Service Problems	2.3	14	(10)	Pupil Neighborhood Disturbance	1.8
15	(15)	Pupil Welfare	2.3	15	(13)	Auxiliary Service Problems	1.8
16	(6)	Pupil Property Accounting	2.2	16	(12)	Co-Curricular Activities	1.6
17	(4)	Pupil Transfers and Enrollment	1.7	17	(6)	Pupil Property Accounting	1.5
18	(10)	Pupil Neighborhood Disturbance	1.2	18	(15)	Pupil Welfare	1.2
			100.0				100.0

Table VI, using the enrollment factor weighting, presents some rather salient differences in frequencies of the various types of problems brought into the offices of the combined schools in the contrasting socioeconomic settings.

> Problems of more frequent incidence in the "high" settings are interesting to note because they ranged over a variety of types, while those more frequent in the "low" settings were primarily of types oriented to pupil behavior.
>
> Extremely large χ^2 values pointed up a greater preoccupation with Physical Plant Facilities (17) and School-Community Relations, Co-Curricular Activities (12), Academic Achievement (11), Pupil Property Accounting (6), and Administrative Organization (1) in "high" settings.

The fact that certain types of problems were more frequent in some schools gives no clue as to whether the frequencies were due to troubles in those areas, or to greater concentration in building and maintaining constructive and innovative programs regarding such matters. All of the problem types listed as more frequent in the "high" setting schools showed χ^2 values which were very highly significant at the .001 level.

> Pupil Classroom Disturbances (8), Misbehavior Around School Building and Grounds (9), Pupil Transfers and Enrollment (4), Administrative Emergencies (3), Pupil Neighborhood Disturbance (10), and Pupil Whereabouts Accounting (5) had the largest χ^2 values for types of problems of great frequency in the "low" settings.
>
> Five of these types were oriented to pupil behavior.
>
> Pupil-behavior problems were generally so frequent and time-consuming that they may have usurped the administrators' attention from other important concerns in the "low" setting schools.

This may be a partial explanation for the narrowness in range of types of problems dealt with more frequently in the schools in the "low" socioeconomic settings.

In Table VII, twelve types of problems appeared to have been significantly more frequent in the two schools with "open" organizational climates, while four types showed up more frequently in the two schools with "closed" climates.

> The problems of greater frequency in the "open" climate ranged over a wide variety of types, whereas types of problems frequent in the "closed" climate had a more narrow range and were primarily oriented to pupil behavior.

Only two types (from the total 18-type array) of problems showed no significant differences in the schools with contrasting climates - - Academic Achievement (11), and Physical Plant Facilities (17).[1] Among the many types more frequent in the "open" climates were seven of the nine, which represented the variety of school concerns not directly connected with pupil behavior problems. The five types of pupil problems found in the "open" climates were the ones least associated with misbehavior.

On the other hand, in the "closed" climates pupil misbehavior dominated the four types found to be more frequent, with Pupil Classroom Disturbance (8) showing up most conspicuously. Problem types (4) and (10) are shown in the table even though they fall within the region of rejection in this study, because at the .05 level of confidence they still have generally acceptable statistical significance and merit mention.

The χ^2 values, though highly significant throughout this table, were smaller than those in Table VI, which contrasted the schools by socioeconomic setting. However, the range of types of problems showing significant differences in frequency was wider when the schools were contrasted by organizational climate.

> Differences in frequencies were more pronounced when schools were contrasted by socioeconomic setting, whereas, more types of

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[1] These two types of problems seem to be more closely associated with "high" socioeconomic setting. (See Table VI.)

TABLE VI

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR PROBLEMS IN TWO SCHOOLS IN A HIGH AND TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING

Types of Problems	High Schools C + D	Low Schools A + B	High Frequencies Obs.	High Frequencies Exp.[c]	Low Frequencies Obs.	Low Frequencies Exp.	χ^2[a]	Level of Significance
Problems of Frequent Incidence in High Settings								
(1)[b] Administrative Organization	+	-	988	878	1264	1374	22.59	.001
(6) Pupil Property Accounting	+	-	144	88	81	137	58.53	.001
(11) Academic Achievement Problems	+	-	266	155	132	243	130.19	.001
(12) Co-Curricular Activities	+	-	197	105	72	164	132.22	.001
(16) School Community Relations	+	-	640	413	421	648	204.28	.001
(17) Physical Plant Facilities	+	-	299	154	96	241	223.77	.001
Problems of Frequent Incidence in Low Settings								
(3) Administrative Emergencies	-	+	1054	1119	1817	1751	6.38	.02
(4) Pupil Transfers and Enrollment	-	+	66	103	197	160	21.84	.001
(5) Pupil Whereabouts Accounting	-	+	96	116	202	182	5.65	.02
(8) Pupil Classroom Disturbance	-	+	91	237	518	372	147.21	.001
(9) Misbehavior School Bldg. and Grounds	-	+	130	196	372	306	36.46	.001
(10) Pupil Neighborhood Disturbance	-	+	53	69	123	107	6.10	.02

[a] χ^2 calculated on basis of expected frequencies determined by enrollment factor weighting: High 39%; Low 61%

Degrees of Freedom 1

[b] Numbers in parentheses refer to category designations

[c] See footnote Table I

TABLE VII

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR PROBLEMS IN TWO SCHOOLS WITH OPEN AND TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES

	Types of Problems	Open Schools B + C	Closed Schools A + D	Open Frequencies		Closed Frequencies		χ^{2a}	Levels of Significance
				Obs.	Exp.[b]	Obs.	Exp.		
	Problems of Frequent Incidence in Open Climates								
(1)	Administrative Organization	+	-	1078	946	1174	1306	31.76	.001
(2)	Personnel Problems	+	-	317	282	354	389	7.49	.01
(3)	Administrative Emergencies	+	-	1349	1205	1521	1665	29.66	.001
(5)	Pupil Whereabouts Accounting	+	-	165	125	133	173	22.05	.001
(6)	Pupil Property Accounting	+	-	126	95	99	130	17.51	.001
(7)	Pupil Accidents & Emergency Sickness	+	-	366	287	318	397	37.47	.001
(12)	Co-Curricular Activities	+	-	164	113	105	156	39.69	.001
(13)	Auxiliary Service Problems	+	-	134	106	119	147	12.73	.001
(14)	Pupil Health Problems	+	-	185	148	167	204	15.96	.001
(15)	Pupil Welfare Problems	+	-	135	88	74	121	43.36	.001
(16)	School-Community Relations	+	-	524	446	537	615	23.53	.001
(18)	In-Service, Professional Growth	+	-	289	241	286	334	16.48	.001
	Problems of Frequent Incidence in Closed Climates								
(4)	Pupil Transfers and Enrollment	-	+	92	110	171	153	5.07	.05
(8)	Pupil Classroom Disturbance	-	+	180	256	429	353	38.92	.001
(9)	Misbehavior School Bldg. and Grounds	-	+	180	211	322	291	7.85	.01
(10)	Pupil Neighborhood Disturbance	-	+	60	74	116	102	4.57	.05

[a] Enrollment factor weighting: Open 42%; Closed 58%

Degrees of Freedom 1

[b] See footnote Table I

problems showed significant differences when schools were contrasted by organizational climate.

A review of Table VI also reveals a close similarity between types of problems listed as frequent in "high" settings and the types of problems listed in this table as frequent in "open" climates. A comparable likeness may be found between the types of problems listed under "low" setting in Table VI and "closed" climate in this table. The inference is reinforced that:

> A close association seems to exist between the effects of the variables "high" and "open," and between "low" and "closed."

Table VIII presents those problems which showed statistically significant differences in terms of internal per cent distribution, between the combined schools in contrasting socioeconomic settings. The five types of problems mentioned as more frequent in the "high" setting schools in this table, were all mentioned in the "high" setting portion of Table III, which dealt with weighted frequency data. Only one type mentioned in Table III did not show up in the "high" setting section of Table V - - Administrative Organization (1). The evidence seems quite conclusive that Physical Plant Facilities (17), School-Community Relations (16), Co-Curricular Activities (12), and Academic Achievement Problems (11), were characteristically more frequent in the schools in "high" socioeconomic settings.[1]

The four types of problems, listed in this table as more frequent in the "low" setting schools, confirm all but two of the types named in the "low" portion of Table III. Only Pupil Whereabouts Accounting (5) and Pupil Neighborhood Disturbance (10) problems failed to show up with significant differences when viewed in terms of this conservative data.

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[1] Pupil Property Accounting (6) problems are mentioned in the table even though the confidence level was only .05, because of the conservative nature of this type of per cent table. (The problems were mostly concerned with "lost and found" articles.)

> Pupil Classroom Disturbance (8), Misbehavior Around School Building and Grounds (9), Administrative Emergencies (3), and Pupil Transfers and Enrollment (4) problems are reinforced by this table as having been indigenously more frequent in the schools in "low" socioeconomic settings.

Table IX shows the types of problems which had internal per cent distributions of significant difference in the combined schools with contrasting organizational climates.

> Only two types of problems showed up in the "closed" climates, with χ^2 values large enough to report - - Pupil Classroom Disturbances (8) and Misbehavior Around School Building and Grounds (9).

The data in both Tables VIII and IX confirm conclusions drawn from earlier tables that:

> The effects of "low" setting and "closed" climate seem to be closely related, and pupil behavior types of problems seem to be significantly more frequent in the "low" and "closed" than in the "high" and "open" schools.

Table X summarizes the weighted frequency data regarding comparisons in types of problems brought to offices of paired schools located in "high" and "low" socioeconomic settings. The χ^2 value for the total array of types of problems was extremely large, 1006.44, with df 17. (The critical value of chi-square at the .001 level is 40.79.)

According to this evidence:

> The null hypothesis (I-B) was rejected at the .001 level of confidence, and the statistical hypothesis was accepted that: the socioeconomic setting of the school affects the types of problems brought to the school office.

Table XI summarizes the weighted frequency data regarding comparisons in types of problems brought to offices of paired schools with "open" and "closed" organizational climates. The χ^2 value for the total array of types of problems was 358.46, with df 17. According to this evidence:

TABLE VIII

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF PROBLEMS IN TWO SCHOOLS IN A HIGH AND TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING

Types of Problems	High Schools C + D	Low Schools A + B	Per Cent		χ^{2a}	Level of Significance
			High	Low		
Problems of Frequent Incidence in High Settings						
(6) Pupil Property Accounting	+	-	2.8	1.3	5.48	.05
(11) Academic Achievement Problems	+	-	5.1	2.0	13.54	.001
(12) Co-Curricular Activities	+	-	3.8	1.1	14.88	.001
(16) School-Community Relations	+	-	12.5	6.1	22.02	.001
(17) Physical Plant Facilities	+	-	5.8	1.3	28.52	.001
Problems of Frequent Incidence in Low Settings						
(3) Administrative Emergencies	-	+	20.5	26.3	7.18	.01
(4) Pupil Transfers and Enrollment	-	+	1.3	2.9	6.10	.02
(8) Pupil Classroom Disturbance	-	+	1.8	7.5	34.92	.001
(9) Misbehavior School Bldg. & Grounds	-	+	2.5	5.5	11.24	.001

[a] Formula for computing value of χ^2 for each category derived in terms of per cent (using units of 1/10 per cent precision).

E.g. (Pupil Property Accounting):

$$\chi^2 = \frac{(fo - fe)^2}{fe} = \frac{(28 - 20.5)^2}{20.5} + \frac{(13 - 20.5)^2}{20.5} = 5.48$$

Degrees of Freedom 1

TABLE IX

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF PROBLEMS IN TWO SCHOOLS WITH OPEN AND TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES

Types of Problems	Open Schools B + C	Closed Schools A + D	Per Cent		χ^{2a}	Level of Significance
			Open	Closed		
Problems of Frequent Incidence in Open Climates						
None						
Problems of Frequent Incidence in Closed Climates						
(8) Pupil Classroom Disturbance	-	+	3.2	6.7	12.36	.001
(9) Misbehavior School Bldg. & Grounds	-	+	3.2	5.0		

[a] See footnote Table VIII

Degrees of Freedom 1

TABLE X

VALUES OF χ^2 BASED ON WEIGHTED[a] FREQUENCIES FOR THE TOTAL ARRAY OF PROBLEMS IN TWO SCHOOLS IN A HIGH AND TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING

	Types of Problems	High Schools C + D	Low Schools A + B	High Frequencies[d]		Low Frequencies		χ^2[b]	Level of Significance[c]
				Obs.	Exp.	Obs.	Exp.		
(1)	Administrative Organization	+	-	988	878	1264	1374	22.59	.001
(2)	Personnel Problems	+	-	284	262	388	410	3.04	---
(3)	Administrative Emergencies	-	+	1054	1119	1817	1751	6.38	.02
(4)	Pupil Transfers and Enrollment	-	+	66	103	197	160	21.84	.001
(5)	Pupil Whereabouts Accounting	-	+	96	116	202	182	5.65	.02
(6)	Pupil Property Accounting	+	-	144	88	81	137	58.53	.001
(7)	Pupil Accidents and Emergency Sickness	+	-	285	267	399	417	1.99	---
(8)	Pupil Classroom Disturbance	-	+	91	237	518	372	147.21	.001
(9)	Misbehavior School Bldg. and Grounds	-	+	130	196	372	306	36.46	.001
(10)	Pupil Neighborhood Disturbance	-	+	53	69	123	107	6.10	.02
(11)	Academic Achievement	+	-	266	155	132	243	130.19	.001
(12)	Co-Curricular Activities	+	-	197	105	72	164	132.22	.001
(13)	Auxiliary Service Problems	+	-	106	99	147	154	0.81	---
(14)	Pupil Health	-	+	125	137	227	215	1.72	---
(15)	Pupil Welfare	-	+	71	82	138	127	2.43	---
(16)	School-Community Relations	+	-	640	413	421	648	204.28	.001
(17)	Physical Plant Facilities	+	-	299	154	96	241	223.77	.001
(18)	In-Service Professional Growth	+	-	237	224	337	350	1.23	---
	Total Number of Problems	+	-	5131	4704	6931	7358	67.79	.001
	χ^2 Value for Total Array, Degrees of Freedom 17							1006.44	.001

---

[a] Enrollment factor weighting: C+D 39% vs. A+B 61%

[b] Degrees of Freedom 1 (for each type of problem and the comparison of totals)

[c] Only levels of significance between .05 and .001 are reported

[d] See footnote Table I

TABLE XI

VALUES OF X^2 BASED ON WEIGHTED[a] FREQUENCIES FOR THE TOTAL ARRAY OF PROBLEMS IN TWO SCHOOLS WITH OPEN AND TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES

	Types of Problems	Open Schools B + C	Closed Schools A + D	Open Frequencies		Closed Frequencies		X^{2b}	Level of Significance[c]
				Obs.	Exp.[d]	Obs.	Exp.		
(1)	Administrative Organization	+	-	1078	946	1174	1306	31.76	.001
(2)	Personnel Problems	+	-	317	282	354	389	7.49	.01
(3)	Administrative Emergencies	+	-	1349	1205	1521	1665	29.66	.001
(4)	Pupil Transfers and Enrollment	-	+	92	110	171	153	5.07	---
(5)	Pupil Whereabouts Accounting	+	-	165	125	133	173	22.05	.001
(6)	Pupil Property Accounting	+	-	126	95	99	130	17.51	.001
(7)	Pupil Accidents & Emergency Sickness	+	-	366	287	318	397	37.47	.001
(8)	Pupil Classroom Disturbance	-	+	180	256	429	353	38.92	.001
(9)	Misbehavior School Bldg. & Grounds	-	+	180	211	322	291	7.85	.01
(10)	Pupil Neighborhood Disturbance	-	+	60	74	116	102	4.57	.05
(11)	Academic Achievement	-	+	153	167	245	231	2.02	---
(12)	Co-Curricular Activities	+	-	164	113	105	156	39.69	.001
(13)	Auxiliary Service Problems	+	-	134	106	119	147	12.73	.001
(14)	Pupil Health	+	-	185	148	167	204	15.96	.001
(15)	Pupil Welfare	+	-	135	88	74	121	43.36	.001
(16)	School-Community Relations	+	-	524	446	537	615	23.53	.001
(17)	Physical Plant Facilities	+	-	151	166	244	229	2.34	---
(18)	In-Service, Professional Growth	+	-	289	241	286	334	16.48	.001
	Total Number of Problems	+	-	5648	5066	6414	6996	115.27	.001
	X^2 Value for the Total Array, Degrees of Freedom 17							358.46	.001

[a] Enrollment factor weighting: B+C 42% vs. A+D 58%

[b] Degrees of Freedom 1 (for each type of problem and comparison of totals)

[c] Only levels of significance between .05 and .001 are reported

[d] See footnote Table I

> The null hypothesis (LL-B) was rejected at the .001 level of confidence, and the statistical hypothesis was accepted that: the organizational climate of the school affects the types of problems brought to the school office.

A comparison of the χ^2 values for the total array of types of problems in Tables X and XI confirms the inference made earlier that:

> The socioeconomic variable, rather than organizational climate, was a greater determinant of the amount of difference in types of problems brought to school offices.
>
> Even the highly conservative internal per cent distribution data (in Tables XII and XIII), which provided only one-sixth of the precision of the weighted frequency data, confirmed the rejection of the null hypotheses I-B and II-B.

The effect of socioeconomic setting proved to have close association with highly significant differences in types of problems brought to the school offices, with a χ^2 value of 149.65, at a .001 level of confidence, in Table XII. The association of the effect of organizational climate on differences in types of problems was less pronounced, yet highly significant at the .01 level of confidence, with a χ^2 value of 36.91, degrees of freedom 17.

Types of Initiators - Combined Schools

Table XIV presents comparisons, in terms of raw frequency data, of the types and number of initiators who brought problems to the offices of schools which were combined with regard to both variables. The untreated raw frequencies disregard differences in the sizes of the schools. However, these data give the facts of the actual occurrences in each office, without the statistical maneuvering to equate schools, which often beclouds the picture of the actual amount of load on individual principals.

Seven types of initiators evidenced no significant difference in frequencies between the schools in "high" and "low" socioeconomic settings.

However, the fourteen types that did show differences in schools in the contrasting settings, varied in frequency at highly significant levels of .01 and .001.

Eleven types of initiators showed no significant difference in frequencies between schools with "open" and "closed" climates. Nine, of the ten types, that did exhibit differences, did so at the .01 and .001 levels of significance.

Judging by the χ^2 values:

> Socioeconomic setting seemed to be a greater determinant of differences in types of initiators who brought problems to school offices than organizational climate.

Yet both variables seemed to show highly significant effects at the .001 level of confidence.

According to the evidence shown in the χ^2 values of the total array of types of initiators:

> The null hypotheses, I-C and II-C, may be rejected at the .001 level of confidence, and the alternative statistical hypotheses accepted that: the socioeconomic setting and the organizational climate of the school, both, affect the types of initiators that bring problems to the school office.

Table XV presents the rank order per cent distribution of initiators of problems in the two schools in the "high" and the two schools in the "low" socioeconomic settings. The greatest differences in rank order placement of the types of initiators occurred in regard to: the Visiting Teacher (ninth in the "high" versus nineteenth in the "low"), and Citizens (eleventh in the "high" versus seventeenth in the "low"): as compared with the Attendance Agent (ninth in the "low" versus seventeenth in the "high") and Police (fourteenth in the "low" versus twenty-first in the "high").

TABLE XII

VALUES OF χ^2 BASED ON INTERNAL PER CENT DISTRIBUTION FOR THE TOTAL ARRAY OF PROBLEMS IN TWO SCHOOLS IN A HIGH AND TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING

	Types of Problems	High Schools C + D	Low Schools A + B	Per Cent		χ^{2}[a]	Level of Significance[b]
				High	Low		
(1)	Administrative Organization	+	-	19.3	18.2	0.32	---
(2)	Personnel Problems	=	=	5.5	5.5	0.00	---
(3)	Administrative Emergencies	-	+	20.5	26.3	7.18	.01
(4)	Pupil Transfers and Enrollment	-	+	1.3	2.9	6.10	.02
(5)	Pupil Whereabouts Accounting	-	+	1.9	3.0	2.46	---
(6)	Pupil Property Accounting	+	-	2.8	1.3	5.34	.05
(7)	Pupil Accidents & Emergency Sickness	-	+	5.6	5.7	0.01	---
(8)	Pupil Classroom Disturbance	-	+	1.8	7.5	34.92	.001
(9)	Misbehavior School Bldg. and Grounds	-	+	2.5	5.5	11.24	.001
(10)	Pupil Neighborhood Disturbance	-	+	1.1	1.8	1.68	---
(11)	Academic Achievement	+	-	5.1	2.0	13.52	.001
(12)	Co-Curricular Activities	+	-	3.8	1.1	14.86	.001
(13)	Auxiliary Service Problems	=	=	2.1	2.1	0.00	---
(14)	Pupil Health	-	+	2.4	3.2	1.14	---
(15)	Pupil Welfare	-	+	1.3	1.6	0.30	---
(16)	School-Community Relations	+	-	12.5	6.1	22.02	.001
(17)	Physical Plant Facilities	+	-	5.8	1.3	28.52	.001
(18)	In-Service Professional Growth	-	+	4.7	4.9	0.04	---
	Total Per Cent of Problems	=	=	100.0	100.0	0.00	---
	χ^2 Value for Total Array, Degrees of Freedom 17					149.65	.001

[a] See footnote Table VIII. Degrees of Freedom 1 (for each type of problem)

[b] Only levels of significance between .05 and .001 are reported

TABLE XIII

VALUES OF χ^2 BASED ON INTERNAL PER CENT DISTRIBUTION FOR THE TOTAL ARRAY OF PROBLEMS IN TWO SCHOOLS WITH OPEN AND TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES

	Types of Problems	Open Schools B + C	Closed Schools A + D	Per Cent		χ^{2a}	Level of Significance[b]
				Open	Closed		
(1)	Administrative Organization	+	-	19.1	18.3	0.17	---
(2)	Personnel Problems	+	-	5.6	5.5	0.00	---
(3)	Administrative Emergencies	+	-	23.8	23.7	0.00	---
(4)	Pupil Transfers and Enrollment	-	+	1.7	2.7	2.27	---
(5)	Pupil Whereabouts Accounting	+	-	2.7	2.1	0.74	---
(6)	Pupil Property Accounting	+	-	2.2	1.5	1.32	---
(7)	Pupil Accidents & Emergency Sickness	+	-	6.5	5.0	1.96	---
(8)	Pupil Classroom Disturbance	-	+	3.2	6.7	12.36	.001
(9)	Misbehavior School Bldg. & Grounds	-	+	3.2	5.0	3.94	.05
(10)	Pupil Neighborhood Disturbance	-	+	1.2	1.8	1.20	---
(11)	Academic Achievement	-	+	2.8	3.8	1.51	---
(12)	Co-Curricular Activities	+	-	2.9	1.6	3.74	---
(13)	Auxiliary Service Problems	+	-	2.3	1.8	0.60	---
(14)	Pupil Health	+	-	3.3	2.6	0.82	---
(15)	Pupil Welfare	+	-	2.3	1.2	3.46	---
(16)	School-Community Relations	+	-	9.3	8.4	0.46	---
(17)	Physical Plant Facilities	-	+	2.7	3.8	1.86	---
(18)	In-Service, Professional Growth	+	-	5.2	4.5	0.50	---
	Total Per Cent of Problems	=	=	100.0	100.0	0.00	---
	χ^2 Value for Total Array, Degrees of Freedom 17					36.91	.01

[a] See footnote Table VIII. Degrees of Freedom 1 (for each type of problem)

[b] Only levels of significance between .05 and .001 are reported

TABLE XIV

χ^2 FOR RAW FREQUENCIES OF INITIATORS OF PROBLEMS IN SCHOOLS COMBINED IN TERMS OF THE VARIABLES HIGH AND LOW SOCIOECONOMIC SETTING, AND OPEN AND CLOSED ORGANIZATIONAL CLIMATE

Types of Initiators	High Schools C + D	Low Schools A + B	χ^{2a}	Lev. of Sig.[b]	Open Schools B + C	Closed Schools A + D	χ^{2a}	Lev. of Sig.[b]
(A) Principal	879	1057	16.37	.001	1058	878	16.74	.001
(B) Assistant Principal	981	1267	36.39	.001	1058	1190	7.75	.01
(C) Secretaries	578	889	65.93	.001	537	930	105.28	.001
(D) Teachers	878	1275	73.20	.001	918	1235	46.67	.001
(E) Pupils	832	1399	144.10	.001	965	1266	40.61	.001
(F) Parents	394	362	1.35	---	428	328	13.23	.001
(G) Citizens	37	13	11.52	.001	29	21	1.28	---
(H) Visiting Teacher	51	5	37.79	.001	45	11	20.64	.001
(I) Attendance Agent	3	72	60.84	.001	45	30	3.37	---
(J) Nurse & Health Dept. Personnel	12	71	43.90	.001	45	38	0.44	---
(K) Custodial and Maintenance Personnel	216	122	26.14	.001	174	164	0.30	---
(L) Other School Service Personnel	35	29	0.56	---	33	31	0.06	---
(M) Supervisors	7	4	0.82	---	3	8	2.27	---
(N) District Administration Personnel	5	20	9.00	.01	16	9	1.96	---
(O) Central Administration Personnel	30	17	3.60	---	19	28	1.72	---
(P) Auxiliary Service Personnel	17	42	10.59	.01	17	42	10.59	.01
(Q) Personnel from Other Schools	49	69	3.39	---	60	58	0.03	---
(R) Social Welfare Agency Personnel	7	5	0.33	---	8	4	1.33	---
(S) Public Services & Com. Agency Personnel	30	42	2.00	---	35	37	0.06	---
(T) Police	4	38	27.52	.001	31	11	9.52	.01
(X) Unknown	86	133	10.09	.01	124	95	3.84	.05
Total Number of Initiators	5131	6931	268.62	.001	5648	6414	48.64	.001
χ^2 Value for Total Array, Degrees of Freedom 20			585.43	.001			287.69	.001

[a] Degrees of Freedom 1 (for each type of initiator, and comparison of tables)

[b] Only levels of significance between .05 and .001 are reported

The types of variances in the table as a whole seem to indicate that:

> There were frequent initiations in the schools in "low" settings by personnel dealing with problems requiring corrective or regulatory services, whereas, the offices of schools in the "high" settings seemed to have more frequent initiations of problems by personnel involved in providing remedial and therapeutic help.

This supports the findings shown in Tables VI and XVII, regarding differences in the nature of the types of problems found to be more prevalent in the schools in contrasting socioeconomic settings.

However, the most significant difference in per cent distribution of initiators appeared in the top positions of the rank order list.

> Principals initiated more of the problems in the "high" settings, whereas Pupils initiated most of the problems in the "low."

This also seems to support another inference made earlier, that:

> Principals in "low" setting schools had less opportunity to exercise choice or control of the types of problems claiming the attention of the school office, being, as it were, more on the receiving end.

The data in Table XVI presents the rank order per cent distribution of initiators in the two schools with "open" and the two schools with "closed" organizational climates. The most noticeable feature of this table is the close similarity between: the rank orders of initiators in the "open" schools of this table and the "high" setting schools of Table XV; and the rank orders of initiators in the "closed" schools of this table and the "low" setting schools of Table XV.

> Throughout the series of tables in this study, the inference of an association between the effects of "high" setting and "open" climate, and "low" setting and "closed" climate persistently emerges.
>
> The Principal showed up as the chief initiator of problems in the "open" climate schools, while this position in rank order was usurped by Pupils in the "closed."

TABLE XV

RANK ORDER OF INTERNAL PER CENT DISTRIBUTION OF INITIATORS IN TWO SCHOOLS IN A HIGH AND TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING

High				Low			
Schools C + D				Schools A + B			
Rank	Cat.	Types of Initiators	Per Cent	Rank	Cat.	Types of Initiators	Per Cent
1	(B)	Assistant Principals	19.1	1	(E)	Pupils	20.2
2	(A)	Principal	17.1	2	(D)	Teachers	18.4
3	(D)	Teachers	17.1	3	(B)	Assistant Principals	18.3
4	(E)	Pupils	16.2	4	(A)	Principal	15.2
5	(C)	Secretaries	11.2	5	(C)	Secretaries	12.8
6	(F)	Parents	7.7	6	(F)	Parents	5.2
7	(K)	Custodial & Maintenance Personnel	4.2	7	(X)	Unknown	1.9
8	(X)	Unknown	1.8	8	(K)	Custodial & Maintenance Personnel	1.8
9	(H)	Visiting Teacher	1.0	9	(I)	Attendance Agent	1.0
10	(Q)	Personnel from Other Schools	1.0	10	(J)	Nurse & Health Dept. Personnel	1.0
11	(G)	Citizens	0.7	11	(Q)	Personnel from Other Schools	1.0
12	(L)	Other School Service Personnel	0.7	12	(P)	Auxiliary Service Personnel	0.6
13	(O)	Central Administration Personnel	0.6	13	(S)	Public Services & Com. Agency Pers.	0.6
14	(S)	Public Services & Com. Agency Pers.	0.6	14	(T)	Police	0.6
15	(P)	Auxiliary Service Personnel	0.3	15	(L)	Other School Service Personnel	0.4
16	(J)	Nurse & Health Dept. Personnel	0.2	16	(N)	District Administration Personnel	0.3
17	(I)	Attendance Agent	0.1	17	(G)	Citizens	0.2
18	(M)	Supervisors	0.1	18	(O)	Central Administration Personnel	0.2
19	(N)	District Administration Personnel	0.1	19	(H)	Visiting Teacher	0.1
20	(R)	Social Welfare Agency Personnel	0.1	20	(M)	Supervisors	0.1
21	(T)	Police	0.1	21	(R)	Social Welfare Agency Personnel	0.1
			100.0				100.0

TABLE XVI

RANK ORDER OF INTERNAL PER CENT DISTRIBUTION OF INITIATORS IN TWO SCHOOLS WITH OPEN AND TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES

Open				Closed			
Schools B + C				Schools A + D			
Rank	Cat.	Types of Initiators	Per Cent	Rank	Cat.	Types of Initiators	Per Cent
1	(A)	Principal	18.7	1	(E)	Pupils	19.7
2	(B)	Assistant Principal	18.7	2	(D)	Teachers	19.3
3	(E)	Pupils	17.1	3	(B)	Assistant Principal	18.4
4	(D)	Teachers	16.3	4	(C)	Secretaries	14.6
5	(C)	Secretaries	9.5	5	(A)	Principal	13.7
6	(F)	Parents	7.6	6	(F)	Parents	5.1
7	(K)	Custodial & Maintenance Personnel	3.1	7	(K)	Custodial & Maintenance Personnel	2.6
8	(X)	Unknown	2.2	8	(X)	Unknown	1.5
9	(Q)	Personnel from Other Schools	1.1	9	(Q)	Personnel from Other Schools	0.9
10	(H)	Visiting Teacher	0.8	10	(P)	Auxiliary Service Personnel	0.7
11	(I)	Attendance Agent	0.8	11	(J)	Nurse & Health Dept. Personnel	0.6
12	(J)	Nurse & Health Dept. Personnel	0.8	12	(S)	Public Services & Com. Agency Pers.	0.6
13	(L)	Other School Service Personnel	0.6	13	(I)	Attendance Agent	0.5
14	(S)	Public Services & Com. Agency Pers.	0.6	14	(L)	Other School Service Personnel	0.5
15	(G)	Citizens	0.5	15	(O)	Central Administration Personnel	0.4
16	(T)	Police	0.5	16	(G)	Citizens	0.3
17	(N)	District Administration Personnel	0.3	17	(H)	Visiting Teacher	0.2
18	(O)	Central Administration Personnel	0.3	18	(M)	Supervisors	0.1
19	(P)	Auxiliary Service Personnel	0.3	19	(N)	District Administration Personnel	0.1
20	(M)	Supervisors	0.1	20	(R)	Social Welfare Agency Personnel	0.1
21	(R)	Social Welfare Agency Personnel	0.1	21	(T)	Police	0.1
			100.0				100.0

The curious reversal of expected rank order position of Police (T), sixteenth in the "open" versus twenty-first in the "closed," may be partially explained by a difference in the nature of the police services rendered. Problems concerning traffic control and safety education appeared more frequently on the videotapes of the "open" climate schools, while pupil accidents and apprehensions were more noticeable in "closed" climate schools.

Comparison of Table XVI with Table XV, with regard to number of points of variance in rank orders of types of initiators, confirms the inference that:

> The effects of socioeconomic setting rather than organizational climate were more determinant of differences in types of persons who brought problems to school offices.

There were 67 points of variance between the schools in contrasting socioeconomic settings, while only 46 points of difference in rank order of types appeared between the schools with contrasting climates.

The data in Table XVII shows the comparison of the two schools in the "high" (C and D) with the two schools in the "low" (A and B) socioeconomic settings, in terms of the weighted frequencies of the various types of persons that initiated problems in the school offices. Again, as in the case of problems, a wide range was apparent in the variety of types more frequent in the "high" settings.

> Rather large χ^2 values indicated that significantly more problems were initiated by Custodial and Maintenance Personnel, Parents, the Principal, Citizens, the Visiting Teacher, and the Assistant Principal in the offices of schools in "high," rather than "low" settings.

> The narrower range in types of initiators frequent in the "low" settings was characterized by the kinds of persons called into play by necessary reaction to pupil behavior oriented problems, i.e., Attendance Agent, Police, Nurse and Health De-

partment Personnel.

This seems to indicate that:

> Personnel in the school offices in the "low" settings were placed more often in the position of being receivers rather than initiators of action.

Table XVIII deals with the weighted frequency comparisons of the two schools with "open" against the two schools with "closed" organizational climates insofar as initiators were concerned. Eight types of initiators showed up as more frequent in the "open" climates, while only one (Secretaries) emerged in the "closed" at levels of significance of .02 and higher.

A very noticeable similarity is manifested between the types of initiators listed in the "open" climate portion of this table and the "high" setting portion of Table XVII. Six of the eight types, listed as characteristic of "high" settings in Table XVII, are duplicated in the "open" climate section of this table. Four more types expand the range to ten. The duplication in types of initiators may indicate a close association between the effects of "open" organizational climates and "high" socio-economic settings.

The constriction in range of types of initiators more frequent in the "closed" climate schools (2) was also exhibited in the "low" setting schools (4) reported in Table XVII.

> It seems that both the "closed" and "low" aspects of the two dichotomous variables tended to restrain certain types of persons from bringing problems to school offices.
>
> "Closed" climates seemed to show a more inhibiting effect on certain types of initiators than "low" settings.

The χ^2 values for Parents (F) and Visiting Teacher (H) in Table XVIII were larger than those in Table XVII (65.68 and 32.16 versus 54.58 and 24.11, respectively). The χ^2 values for the Principal (A) as an initiator

TABLE XVII

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INITIATORS OF PROBLEMS IN TWO SCHOOLS IN A HIGH AND TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING

	Types of Initiators	High Schools C + D	Low Schools A + B	High Frequencies		Low Frequencies		χ^2[a]	Level of Significance
				Obs.	Exp.[b]	Obs.	Exp.		
	Frequent Initiators in High Settings								
(A)	Principal	+	-	879	755	1057	1181	33.39	.001
(B)	Assistant Principal	+	-	981	877	1267	1371	20.22	.001
(F)	Parents	+	-	394	295	362	461	54.48	.001
(G)	Citizens	+	-	37	20	13	30	27.50	.001
(H)	Visiting Teacher	+	-	51	22	5	34	24.11	.001
(K)	Custodial and Maintenance Personnel	+	-	216	132	122	206	87.70	.001
(L)	Other School Service Personnel	+	-	35	25	29	39	6.56	.02
(O)	Central Administration Personnel	+	-	30	18	17	29	12.97	.001
	Frequent Initiators in Low Settings								
(I)	Attendance Agent	-	+	3	29	72	46	38.01	.001
(J)	Nurse and Health Dept. Personnel	-	+	12	32	71	51	20.34	.001
(N)	District Administration Personnel	-	+	5	10	20	15	4.15	.05
(T)	Police	-	+	4	16	38	26	14.54	.001

[a] Enrollment factor weighting: High 39%; Low 61%

Degrees of Freedom 1

[b] See footnote Table I

TABLE XVIII

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INITIATORS OF PROBLEMS IN TWO SCHOOLS WITH OPEN AND TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES

Types of Initiators	Open Schools B + C	Closed Schools A + D	Open Frequencies		Closed Frequencies		χ^{2}[a]	Level of Significance
			Obs.	Exp.[b]	Obs.	Exp.		
Frequent Initiators in Open Climates								
(A) Principal	+	-	1058	812	878	1124	127.28	.001
(B) Assistant Principal	+	-	1058	944	1190	1304	23.74	.001
(F) Parents	+	-	428	318	328	438	65.68	.001
(G) Citizens	+	-	29	20	21	30	5.26	.05
(H) Visiting Teacher	+	-	45	23	11	33	32.16	.001
(I) Attendance Agent	+	-	45	32	30	43	9.21	.01
(J) Nurse and Health Dept. Personnel	+	-	45	35	38	48	4.94	.05
(K) Custodial and Maintenance Personnel	+	-	174	142	164	196	12.43	.001
(N) District Administration Personnel	+	-	16	10	9	15	6.00	.02
(T) Police	+	-	31	18	11	24	16.43	.001
(X) Unknown	+	-	124	95	95	127	19.19	.001
Frequent Initiators in Closed Climates								
(C) Secretaries	-	+	537	615	930	852	17.46	.001
(P) Auxiliary Service Personnel	-	+	17	25	42	34	4.44	.05

[a] Enrollment factor weighting: Open 42%; Closed 58%

Degrees of Freedom 1

[b] See footnote Table I

were 33.39 in Table XVII, and 127.28 in Table XVIII. This seems to indicate that:

> The activity of Parents, Visiting Teacher, and Principals as initiators, was more a matter of "open" climate than "high" setting.

Table XIX documents the comparison of the two "high" schools with the two "low" schools in terms of internal per cent distribution of initiators. The data show the same tendencies described in Table XVII, but on a smaller scale due to the statistical convervatism of the per cent comparison. Initiators significantly more frequent in the "high" settings included the Visiting Teacher, while in the "low" settings the Attendance Agent appeared to initiate significantly more problems. This seems to confirm earlier inferences that:

> Personnel providing remedial and therapeutic help were more active in "high" settings, while persons giving corrective and regulatory services were more active in the "low" settings.

Table XX shows the most significant differences in frequencies among the various types of initiators between the "open" and "closed" climate schools as evidenced in internal per cent distribution. The differences in relative frequencies with which Secretaries and Principals initiated problems in the schools with contrasting climates arouses interesting speculation as to possible variations in role expectations existing among office personnel in the four schools.

> With the preponderance of pupil behavior problems (see Table VII) confronting principals in the "closed" climate schools, perhaps secretaries had to take over more initiation of problems concerning administrative organization and emergencies, whereas, principals in "open" climate schools with less pupil behavior problems, were more free to initiate a wide variety of types of activities.

Table XXI summarizes the weighted frequency data regarding comparisons in types of initiators that brought problems to the offices of paired schools located in "high" and "low" socioeconomic settings. The χ^2 value for the total array of types of initiators was 357.71 with degrees of freedom 20. (The critical value of chi-square at .001 level is 45.32.)

According to this evidence:

> The null hypothesis (I-C) was rejected at the .001 level of confidence, and the alternative statistical hypothesis was accepted that: the socioeconomic setting of the school affects the types of initiators that bring problems to the school office.

Table XXII summarizes the weighted frequency data regarding comparisons in types of initiators that brought problems to the offices of paired schools with "open" and "closed" organizational climates. The χ^2 value for the total array of types of initiators was 357.66, with df 20. According to this evidence:

> The null hypothesis (II-C) was rejected, and the alternative statistical hypothesis was accepted that: the organizational climate of the school affects the types of initiators that bring problems to the school office.
>
> Even the highly conservative internal per cent distribution data (in Tables XXIII and XXIV), confirmed the rejection of the null hypotheses I-C and II-C.

The effect of socioeconomic setting showed close association with highly significant differences in the types of initiators that brought problems to the school offices, with a χ^2 value of 52.82, at a .001 level of confidence in Table XXII. The association of the effect of organizational climate on differences in the types of initiators that brought problems to school offices was less pronounced, yet highly significant at the .01 level of confidence, with a χ^2 value of 39.44, degrees of freedom 20. Hence:

> Statistical tests of the three forms of major data confirmed the rejection of all of the hypotheses at .01 and .001 levels of confidence.

TABLE XIX

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF INITIATORS OF PROBLEMS IN TWO SCHOOLS IN A HIGH AND TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING

Types of Initiators	High Schools C + D	Low Schools A + B	Per Cent		χ^{2a}	Level of Significance
			High	Low		
Frequent Initiators in High Settings						
(F) Parents	+	-	7.7	5.2	4.84	.05
(H) Visiting Teacher	+	-	1.0	0.1	7.36	.01
(K) Custodial and Maintenance Personnel	+	-	4.2	1.8	9.60	.01
Frequent Initiators in Low Settings						
(E) Pupils	-	+	16.2	20.2	4.38	.05
(I) Attendance Agent	-	+	0.1	1.0	7.36	.01
(J) School Nurse & Health Dept. Personnel	-	+	0.2	1.0	5.32	.05

[a] See footnote Table VIII

Degrees of Freedom 1

TABLE XX

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF INITIATORS OF PROBLEMS IN TWO SCHOOLS WITH OPEN AND TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES

Types of Initiators	Open Schools B + C	Closed Schools A + D	Per Cent		χ^{2a}	Level of Significance
			Open	Closed		
Frequent Initiators in Open Climates						
(A) Principal	+	-	18.7	13.7	7.60	.01
(F) Parents	+	-	7.6	5.1	4.56	.05
Frequent Initiators in Closed Climates						
(C) Secretaries	-	+	9.5	14.6	10.40	.01

[a] See footnote Table VIII.

Degrees of Freedom 1

TABLE XXI

VALUES OF χ^2 BASED ON WEIGHTED[a] FREQUENCIES FOR THE TOTAL ARRAY OF INITIATORS IN TWO SCHOOLS IN A HIGH AND TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING

Types of Initiators	High Schools C + D	Low Schools A + B	High Frequencies		Low Frequencies		χ^2[b]	Level of Significance[c]
			Obs.	Exp.[d]	Obs.	Exp.		
(A) Principal	+	-	879	755	1057	1181	33.39	.001
(B) Assistant Principal	+	-	981	877	1267	1371	20.22	.001
(C) Secretaries	+	-	578	572	889	895	0.10	---
(D) Teachers	+	-	878	840	1275	1313	2.87	---
(E) Pupils	-	+	832	870	1399	1361	2.72	---
(F) Parents	+	-	394	295	362	461	54.48	.001
(G) Citizens	+	-	37	20	13	30	27.50	.001
(H) Visiting Teacher	+	-	51	22	5	34	24.11	.001
(I) Attendance Agent	-	+	3	29	72	46	38.01	.001
(J) Nurse and Health Dept. Personnel	-	+	12	32	71	51	20.34	.001
(K) Custodial & Maintenance Personnel	+	-	216	132	122	206	87.70	.001
(L) Other School Service Personnel	+	-	35	25	29	39	6.56	.02
(M) Supervisors	+	-	7	4	4	7	3.54	---
(N) District Administration Personnel	-	+	5	10	20	15	4.15	.05
(O) Central Administration Personnel	+	-	30	18	17	29	12.97	.001
(P) Auxiliary Service Personnel	-	+	17	23	42	36	2.57	---
(Q) Personnel from Other Schools	+	-	49	46	69	72	0.33	---
(R) Social Welfare Agency Personnel	+	-	7	5	5	?	1.37	---
(S) Public Services & Com. Agency Pers.	+	-	30	28	42	44	0.23	---
(T) Police	-	+	4	16	38	26	14.54	.001
(X) Unknown	+	-	86	85	133	134	0.01	---
Total Number of Initiators	+	-	5131	4704	6931	7358	67.79	.001
χ^2 Value for Total Array, Degrees of Freedom 20							357.71	.001

[a] Enrollment factor weighting C+D 39% vs. A+B 61%

[b] Degrees of Freedom 1 (for each type of initiator and the comparison of totals)

[c] Only levels of significance between .05 and .001 are reported

[d] See footnote Table I

TABLE XXII

VALUES OF χ^2 BASED ON WEIGHTED[a] FREQUENCIES FOR THE TOTAL ARRAY OF INITIATORS IN TWO SCHOOLS WITH OPEN AND TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES

Types of Initiators	Open Schools B + C	Closed Schools A + D	Open Frequencies Obs.	Open Frequencies Exp.[d]	Closed Frequencies Obs.	Closed Frequencies Exp.	χ^2[b]	Level of Significance[c]
(A) Principal	+	-	1058	812	878	1124	127.28	.001
(B) Assistant Principal	+	-	1058	944	1190	1304	23.74	.001
(C) Secretaries	-	+	537	615	930	852	17.46	.001
(D) Teachers	+	-	918	908	1235	1245	0.16	---
(E) Pupils	+	-	965	937	1266	1294	1.45	---
(F) Parents	+	-	428	318	328	438	65.68	.001
(G) Citizens	+	-	29	20	21	30	5.26	.05
(H) Visiting Teacher	+	-	45	23	11	33	32.16	.001
(I) Attendance Agent	+	-	45	32	30	43	9.21	.01
(J) Nurse and Health Dept. Personnel	+	-	45	35	38	48	4.94	.05
(K) Custodial and Maintenance Personnel	+	-	174	142	164	196	12.43	.001
(L) Other School Service Personnel	+	-	33	26	31	38	2.30	---
(M) Supervisors	-	+	3	5	8	6	1.46	---
(N) District Administration Personnel	+	-	16	10	9	15	6.00	.02
(O) Central Administration Personnel	-	+	19	20	28	27	0.08	---
(P) Auxiliary Service Personnel	-	+	17	25	42	34	4.44	.02
(Q) Personnel from Other Schools	+	-	60	50	58	68	3.47	---
(R) Social Welfare Agency Personnel	+	-	8	4	4	8	3.09	---
(S) Public Services & Com. Agency Pers.	+	-	35	30	37	42	1.43	---
(T) Police	+	-	31	18	11	24	16.43	.001
(X) Unknown	+	-	124	92	95	127	19.19	.001
Total Number of Initiators	+	-	5648	5066	6414	6996	115.27	.001
χ^2 Value for Total Array, Degrees of Freedom 20							357.66	.001

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[a] Enrollment factor weighting: B+C 42% vs. A+D 58%

[b] Degrees of Freedom 1 (for each type of initiator and comparison of totals)

[c] Only levels of significance between .05 and .001 are reported

[d] See footnote Table I

TABLE XXIII

VALUES OF χ^2 BASED ON INTERNAL PER CENT DISTRIBUTION FOR THE TOTAL ARRAY OF INITIATORS IN TWO SCHOOLS IN A HIGH AND TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING

Types of Initiators	High Schools C + D	Low Schools A + B	Per Cent		χ^{2a}	Level of Significance[b]
			High	Low		
(A) Principal	+	-	17.1	15.2	1.11	---
(B) Assistant Principal	+	-	19.1	18.3	0.16	---
(C) Secretaries	-	+	11.2	12.8	1.06	---
(D) Teachers	-	+	17.1	18.4	0.47	---
(E) Pupils	-	+	16.2	20.2	4.38	.05
(F) Parents	+	-	7.7	5.2	4.84	.05
(G) Citizens	+	-	0.7	0.2	2.77	---
(H) Visiting Teacher	+	-	1.0	0.1	7.36	.01
(I) Attendance Agent	-	+	0.1	1.0	7/36	.01
(J) Nurse and Health Dept. Personnel	+	-	0.2	1.0	5.32	.05
(K) Custodial & Maintenance Personnel	+	-	4.2	1.8	9.60	.01
(L) Other School Service Personnel	+	-	0.7	0.4	0.80	---
(M) Supervisors	=	=	0.1	0.1	0.00	---
(N) District Administration Personnel	-	+	0.1	0.3	1.00	---
(O) Central Administration Personnel	+	-	0.6	0.2	2.00	---
(P) Auxiliary Service Personnel	-	+	0.3	0.6	1.00	---
(Q) Personnel from Other Schools	=	=	1.0	1.0	0.00	---
(R) Social Welfare Agency Personnel	=	=	0.1	0.1	0.00	---
(S) Public Services & Com. Agency Personnel	=	=	0.6	0.6	0.00	---
(T) Police	-	+	0.1	0.6	3.56	---
(X) Unknown	-	+	1.8	1.9	0.03	---
Total Per Cent of Initiators	=	=	100.0	100.0	0.00	---
χ^2 Value for Total Array, Degrees of Freedom 20					52.82	.001

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[a] See footnote Table VIII. Degrees of Freedom 1 (for each type of initiator)

[b] Only levels of significance between .05 and .001 are reported

TABLE XXIV

VALUES OF χ^2 BASED ON INTERNAL PER CENT DISTRIBUTION FOR THE TOTAL ARRAY OF INITIATORS IN TWO SCHOOLS WITH OPEN AND TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES

Types of Initiators	Open Schools B + C	Closed Schools A + D	Per Cent Open	Per Cent Closed	χ^2[a]	Level of Significance[b]
(A) Principal	+	-	18.7	13.7	7.60	.01
(B) Assistant Principal	+	-	18.7	18.4	0.04	---
(C) Secretaries	-	+	9.5	14.6	10.40	.01
(D) Teachers	-	+	16.3	19.3	2.52	---
(E) Pupils	-	+	17.1	19.7	1.82	---
(F) Parents	+	-	7.6	5.1	4.56	.05
(G) Citizens	+	-	0.5	0.3	0.50	---
(H) Visiting Teacher	+	-	0.8	0.2	3.60	---
(I) Attendance Agent	+	-	0.8	0.5	0.68	---
(J) Nurse & Health Dept. Personnel	+	-	0.8	0.6	0.28	---
(K) Custodial & Maintenance Personnel	+	-	3.1	2.6	0.44	---
(L) Other School Service Personnel	+	-	0.6	0.5	0.08	---
(M) Supervisors	=	=	0.1	0.1	0.00	---
(N) District Administration Personnel	+	-	0.3	0.1	1.00	---
(O) Central Administration Personnel	-	+	0.3	0.4	0.14	---
(P) Auxiliary Service Personnel	-	+	0.3	0.7	1.60	---
(Q) Personnel from Other Schools	+	-	1.1	0.9	0.20	---
(R) Social Welfare Agency Personnel	=	=	0.1	0.1	0.00	---
(S) Public Services & Com. Agency Personnel	=	=	0.6	0.6	0.00	---
(T) Police	+	-	0.5	0.1	2.66	---
(X) Unknown	+	-	2.2	1.5	1.32	---
Total Per Cent of Initiators	=	=	100.0	100.0	0.00	---
χ^2 Value for Total Array, Degrees of Freedom 20					39.44	.01

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[a] See footnote Table VIII. Degrees of Freedom 1 (for each type of Initiator)

[b] Only levels of significance between .05 and .001 are reported

Types of Problems - Individual Schools

Following the analysis of the major data, a closer examination of the individual schools, which participated in the project, seems pertinent. Table XXV presents the raw frequencies of occurrence of each type of problem in the four schools, representing, in one way, the work load of the principals. Since this data does not recognize differences in the sizes of the schools, statistical comparisons were not processed from raw frequencies, as such.

Weighted frequency and internal per cent distribution data comparing individual schools with regard to problems may be found in Appendix B (Tables XXXI through XL). Mention must be made of a somewhat skewing effect in data caused by an unusual organizational arrangement in School D (revealed in the principal's interview data of the unfinished Litwak-Meyer study) whereby most Pupil Classroom Disturbance problems (8) were not sent to the office, but were routed, instead, to the "conference" teachers. The consequence was that very low frequencies for this type of problem were recorded in the office. By thus relieving the office personnel from dealing with this seemingly most time-consuming type of problem, there was freedom of choice to devote an unusual amount of attention to Physical Plant Facilities (17). There may be indications here also of basic differences in the principals' concepts of their roles, and the dimensions of the job.

Table XXVI shows evidence that:

> There seemed to be compounding effects on certain problems in a "high" setting school with an "open" climate, and in a "low" setting school with a "closed" climate.

Notice the wide spread of the ten types of problems which were more

TABLE XXV

RAW FREQUENCIES OF PROBLEMS IN FOUR INDIVIDUAL SCHOOLS[a]

Types of Problems	High Open School C	High Closed School D	Low Open School B	Low Closed School A
(1) Administrative Organization	552	436	526	738
(2) Personnel Problems	182	104	135	252
(3) Administrative Emergencies[b]	748	305	601	1216
(4) Pupil Transfers and Enrollment	28	38	64	133
(5) Pupil Whereabouts Accounting	59	37	106	96
(6) Pupil Property Accounting	100	44	26	55
(7) Pupil Accidents and Emergency Sickness	236	49	130	269
(8) Pupil Classroom Disturbance	70	21	110	408
(9) Misbehavior School Bldg. and Grounds	76	54	104	268
(10) Pupil Neighborhood Disturbance	15	38	45	78
(11) Academic Achievement	118	148	35	97
(12) Co-Curricular Activities	122	75	42	30
(13) Auxiliary Service Problems	53	53	81	66
(14) Pupil Health	54	71	131	97
(15) Pupil Welfare	44	27	91	47
(16) School-Community Relations	307	333	217	204
(17) Physical Plant Facilities	98	201	53	43
(18) In-Service, Professional Growth	124	113	165	172
Totals	2986	2145	2662	4269
Grand Total	12,062			

[a] Enrollment figures of the four schools were: C 860, D 524, B 623, A 1541

[b] Includes unidentified problems: School C 163, School D 125, School B 290, School A 512

frequent in the "high-open" school (C), and the narrow range of the four pupil-behavior-oriented types of problems which were more frequent in the "low-closed" school (A).

> Observe the rather large χ^2 values showing great differences in Co-Curricular Activities (12) and School-Community Relations (16) between the "high-open" and the "low-closed" schools.
>
> Notice, also, the large χ^2 values showing great differences in Pupil Classroom Disturbance (8) and Misbehavior Around School Building and Grounds (9) problems between the "low-closed" and the "high-open" schools.

The comparison of Table XXVII with Table XXVI gives indication of neutralizing effects in the "high" setting school with a "closed" climate (School D), and the "low" setting school with an "open" climate (School B). The spread in the range of types of problems showing significantly great frequencies tended to be more equal in the contrasting settings - - five in the "high" versus seven in the "low." Significant differences in frequencies of the following types of problems did not appear: Administrative Organization (1), Personnel Problems (2), Pupil Transfers and Enrollment (4), Pupil Neighborhood Disturbance (9), and In-Service, Professional Growth (18). A better balance was shown in the amount of activity in those problem areas between the two schools. The χ^2 values, which indicate the extent of the differences between the two schools, were smaller in Table XXVII than in Table XXVI in regard to Pupil Property Accounting (8.29 versus 54.13), Co-Curricular Activities (15.17 versus 127.90), School-Community Relations (46.85 versus 128.49), in the "high" setting. While the "low" setting school showed smaller χ^2 values in Pupil Classroom Disturbance (46.77 versus 94.49), and Misbehavior Around School Building and Grounds (9.20 versus 29.05). Significantly more activity was shown in the "low-open" school in Administrative Emergencies (1), Pupil Whereabouts Accounting (5), Pupil Health (14), and Pupil Welfare (15) problems.

The implication seems clear that:

> Different organizational climates may have compounded or offset many of the indigenous effects of socioeconomic setting.

Types of Initiators - - Individual Schools

Table XXVIII presents the raw frequencies of occurrence for each type of initiator in the four schools: other tables in Appendix B (Tables XLI through L) present the comparisons of the individual schools with regard to initiators, in terms of weighted frequency and internal per cent distribution data. Some unique but insignificant individual peculiarities appear which do not affect the combined data.

Table XXIX shows evidence of the compounding effect of a "high" setting with an "open" climate, and a "low" setting with a "closed" climate. Notice the wide spread of the seven types of initiators which were more frequent in the "high-open" school (C), and the narrow range of the three types of initiators which were more frequent in the "low-closed" school (A).

Observe the rather large χ^2 values showing great difference in Citizens (G), Visiting Teacher (H), and Custodial and Maintenance Personnel (K) between the "high-open" and "low-closed" schools. Notice, also, the χ^2 values showing differences in the amount of initiation of problems by the Attendance Agent (I), and the Nurse and Health Department Personnel (J) between the "low-closed" and the "high-open" schools.

The comparison of Table XXX with Table XXIX gives indications of a neutralizing effect when the climate was "closed" in the "high" setting school (D), and "open" in the "low" setting school (B). The spread in

TABLE XXVI

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR PROBLEMS IN TWO SCHOOLS: ONE WITH AN OPEN CLIMATE IN A HIGH SOCIOECONOMIC SETTING AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE IN A LOW SOCIOECONOMIC SETTING

	Types of Problems	High Open School C	Low Closed School A	High Open Frequencies Obs.	Exp.[b]	Low Closed Frequencies Obs.	Exp.	χ^{2a}	Level of Significance
	Problems of Frequent Incidence in the High-Open School								
(1)	Administrative Organization	+	-	552	464	738	826	26.07	.001
(2)	Personnel Problems	+	-	182	156	252	278	6.76	
(6)	Pupil Property Accounting	+	-	100	56	55	99	54.13	.001
(7)	Pupil Accidents & Emergency Sickness	+	-	236	182	269	323	25.05	.001
(11)	Academic Achievement	+	-	118	77	97	138	16.82	.001
(12)	Co-Curricular Activities	+	-	122	55	30	97	127.90	.001
(15)	Pupil Welfare Problems	+	-	44	33	47	58	4.66	.05
(16)	School-Community Relations	+	-	307	184	204	327	128.49	.001
(17)	Physical Plant Facilities	+	-	98	51	43	90	67.85	.001
(18)	In-Service, Professional Growth	+	-	124	107	172	189	4.23	.05
	Problems of Frequent Incidence in the Low-Closed School								
(4)	Pupil Transfers and Enrollment	-	+	28	58	133	103	24.26	.001
(8)	Pupil Classroom Disturbance	-	+	70	172	408	306	94.49	.001
(9)	Misbehavior School Bldg. & Grounds	-	+	76	124	268	220	29.05	.001
(10)	Pupil Neighborhood Disturbance	-	+	15	33	78	60	15.22	.001

[a] Enrollment factor weighting: High-Open 36%; Low-Closed 64%

Degrees of Freedom 1

[b] See footnote Table I

TABLE XXVII

VALUES OF X^2 FOUND TO BE SIGNIFICANT FOR PROBLEMS IN TWO SCHOOLS: ONE WITH AN OPEN ORGANIZATIONAL CLIMATE IN A LOW SOCIOECONOMIC SETTING AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE IN A HIGH SOCIOECONOMIC SETTING

	Types of Problems	High Closed School D	Low Open School B	High Closed Frequencies		Low Open Frequencies		X^2[a]	Level of Significance
				Obs.	Exp.[b]	Obs.	Exp.		
	Problems of Frequent Incidence in the High-Closed School								
(6)	Pupil Property Accounting	+	-	44	32	26	38	8.29	.01
(11)	Academic Achievement	+	-	148	84	35	99	90.13	.001
(12)	Co-Curricular Activities	+	-	75	54	42	63	15.17	.001
(16)	School-Community Relations	+	-	333	253	217	297	46.85	.001
(17)	Physical Plant Facilities	+	-	201	117	53	137	111.81	.001
	Problems of Frequent Incidence in the Low-Open School								
(3)	Administrative Emergencies	-	+	305	417	601	489	55.73	.001
(5)	Pupil Whereabouts Accounting	-	+	37	66	106	77	23.66	.001
(7)	Pupil Accidents & Emergency Sickness	-	+	49	82	130	97	24.51	.001
(8)	Pupil Classroom Disturbance	-	+	21	60	110	71	46.77	.001
(9)	Misbehavior School Bldg. & Grounds	-	+	54	73	104	85	9.20	.01
(14)	Pupil Health	-	+	71	93	131	109	9.64	.01
(15)	Pupil Welfare	-	+	27	54	91	64	24.89	.001

[a] Enrollment factor weighting: High-Closed 46%; Low-Open 54%

Degrees of Freedom 1

[b] See footnote Table I

TABLE XXVIII

RAW FREQUENCIES OF INITIATORS OF PROBLEMS IN FOUR INDIVIDUAL SCHOOLS[a]

Types of Initiators	High Open School C	High Closed School D	Low Open School B	Low Closed School A
(A) Principal	419	460	639	418
(B) Assistant Principal	605	376	453	814
(C) Secretaries	302	276	235	654
(D) Teachers	476	402	442	833
(E) Pupils	582	250	383	1016
(F) Parents	286	108	142	220
(G) Citizens	22	15	7	6
(H) Visiting Teacher	44	7	1	4
(I) Attendance Agent	3	1	43	29
(J) Nurse and Health Dept. Personnel	2	9	42	29
(K) Custodial and Maintenance Personnel	92	124	82	40
(L) Other School Service Personnel	18	17	15	14
(M) Supervisors	0	7	3	1
(N) District Administration Personnel	0	5	16	4
(O) Central Administration Personnel	13	17	6	11
(P) Auxiliary Service Personnel	10	7	7	35
(Q) Personnel from Other Schools	33	16	27	42
(R) Social Welfare Agency Personnel	7	0	1	4
(S) Public Services and Com. Agency Personnel	12	18	23	19
(T) Police	1	3	30	8
(X) Unknown	59	27	65	68
Totals	2986	2145	2662	4269
Grand Total	12,062			

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[a] Enrollment figures of the four schools were: C 860, D 524, B 623, A 1541

range of types of initiators, showing significantly greater frequencies in the contrasting settings, tended to be more equal - - Table XXX showing four in the "high" versus five in the "low." Significant differences between the two schools in contrasting settings did not appear in the following types of initiators: Assistant Principal (B), Parents (F), and Other School Service Personnel (L). The χ^2 values were smaller in Table XXX than in Table XXIX, regarding such types of initiators as: Citizens (4.58 versus 22.40), the Visiting Teacher 4.50 versus 61.89), and Custodial and Maintenance Personnel (16.43 versus 63.38) - - types characteristically more frequent in the "high" than "low" setting. These smaller χ^2 values seem to indicate either more initiations in the "low-open" school, or less initiations in the "high-closed" or both - - when compared with the data in Table XXIX of the "high-open" and "low-closed" schools.

The χ^2 values of the Attendance Agent (I), and Nurse and Health Department Personnel (J) - - types characteristically more frequent in the "low" setting schools - - were larger in Table XXX than in Table XXIX (33.09 versus 10.80, and 15.52 versus 11.41 respectively). More types of initiators appeared with greater frequency in the "low" setting school, such as: the Principal (A), Pupils (E), and Police (T).

> An "open" climate seemed to have the effect of encouraging more initiations of problems by more types of persons, whereas, a "closed" climate seemed to inhibit both the number of initiations, and the extent of the variety of types of persons who brought problems to the school offices.

This concludes the analysis of the statistical tables which presented the data of this study in three forms: in terms of raw frequencies; frequencies weighted by the enrollment factor; and according to the internal per cent distribution of problems and their initiators within the schools.

TABLE XXIX

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INITIATORS IN TWO SCHOOLS: ONE WITH AN OPEN ORGANIZATIONAL CLIMATE IN A HIGH SOCIOECONOMIC SETTING AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE IN A LOW SOCIOECONOMIC SETTING

Types of Initiators	High Open School C	Low Closed School A	High Open Frequencies		Low Closed Frequencies		χ^{2}[a]	Level of Significance
			Obs.	Exp.[b]	Obs.	Exp.		
Frequent Initiators in the High-Open School								
(A) Principal	+	-	419	301	418	536	72.24	.001
(B) Assistant Principal	+	-	605	511	814	908	27.02	.001
(F) Parents	+	-	286	182	220	324	92.81	.001
(G) Citizens	+	-	22	10	6	18	22.40	.001
(H) Visiting Teacher	+	-	44	17	4	31	61.89	.001
(K) Custodial and Maintenance Personnel	+	-	92	48	40	84	63.38	.001
(L) Other School Service Personnel	+	-	18	12	14	20	4.80	.05
Frequent Initiators in the Low-Closed School								
(C) Secretaries	-	+	302	344	654	612	8.01	.01
(I) Attendance Agent	-	+	3	12	29	20	10.80	.01
(J) Nurse and Health Dept. Personnel	-	+	2	11	29	20	11.41	.001

[a] Enrollment factor weighting: High-Open 36%; Low-Closed 64%

Degrees of Freedom 1

[b] See footnote Table I

TABLE XXX

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INITIATORS IN TWO SCHOOLS: ONE WITH AN OPEN ORGANIZATIONAL CLIMATE IN A LOW SOCIOECONOMIC SETTING AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE IN A HIGH SOCIOECONOMIC SETTING

Types of Problems	High Closed School D	Low Open School B	High Closed		Low Open		χ^{2a}	Level of Significance
			Frequencies[b]		Frequencies			
			Obs.	Exp.	Obs.	Exp.		
Frequent Initiators in the High-Closed School								
(C) Secretaries	+	-	276	235	235	276	13.24	.001
(G) Citizens	+	-	15	10	7	12	4.58	.05
(H) Visiting Teacher	+	-	7	4	1	4	4.50	.05
(K) Custodial and Maintenance Personnel	+	-	124	95	82	111	16.43	.001
Frequent Initiators in the Low-Open School								
(A) Principal	-	+	460	506	639	593	7.75	.01
(E) Pupils	-	+	250	291	383	342	3.95	.05
(I) Attendance Agent	-	+	1	20	43	24	33.09	.001
(J) Nurse and Health Dept. Personnel	-	+	9	23	42	28	15.52	.001
(T) Police	-	+	3	15	30	18	17.60	.001

[a] Enrollment factor weighting: High-Closed 46%; Low-Open 54%

Degrees of Freedom 1

[b] See footnote Table I

A complete summary of the findings extrapolated from the data is reported in the next chapter.

CHAPTER V

FINDINGS AND CONCLUSIONS

Study Design

The object of this study was to investigate the effect of socioeconomic setting and organizational climate upon problems brought to elementary school offices, by means of new data-gathering devices - - videotape recordings. The hypotheses tested concerned the question of whether the two above-mentioned variables affect the number of problems, the types of problems, and the kinds of persons initiating problems brought to the elementary school offices. The region of rejection for the null hypotheses was established by setting the level of significance at: $\alpha = .02$.

A sample of the Detroit Public Schools consisted of two schools in a "high" socioeconomic setting, one with an "open" and one with a "closed" organizational climate; and two schools in a "low" setting, one with an "open" and the other with a "closed" climate. Categories were set up for 18 types of problems and 21 types of initiators, to be tabulated into appropriate coding grids.

A total of 12,062 problems, each with an initiator, was extracted from the accumulated videotapes of fourteen days of recording in each of the four school offices. Adequacy of sampling was determined by the stabilization of odd and even day divisions of data from each school. All videotapes were coded by two different observers.. The final outcome was based on coder reliability of 87 and 80 per cent, respectively, for problems and initiators. The χ^2 statistical test was used to determine the significance of differences.

The results of this study appear to be conclusive. All of the statistical evidence, shown by each of the three forms of data presentation (raw frequencies, frequencies weighted by the enrollment factor, and internal per cent distribution data), revealed highly significant differences confirming the rejection of the entire set of null hypotheses at the .01 and .001 levels of significance. The effects of both variables were apparently closely related to differences in number, types, and initiators of problems brought to the elementary school offices.

Assessment of the Media

The use of remotely controlled miniature video-cameras and recorders offered many distinct advantages:

1. Observation of administrators at work in the actual job situations was possible with a maximum amount of objectivity and authenticity and a minimum amount of contamination of data. It provided easy access to the privacy of the principal's inner office.

This medium afforded greater objectivity and validity than questionnaires, tests, logs, and other written responses, more authenticity than observations based on simulated materials in simulated situations, more accessibility and less contamination than human observers-on-the-scene. Principals in the four schools were interviewed after the completion of the recording phase concerning effects they may have noticed on the normal operation of the offices produced by the presence of the equipment. The only difference noted was that two or three teachers deliberately avoided coming to the office during the project period. Otherwise, the claim of consultants was substantiated that within two days the impersonal nature of mechanical equipment rendered the office personnel almost completely oblivious to its presence. Visitors to the offices generally ignored the equipment, seemingly unaware that it was in operation. Inquiries concerning the presence of cameras and microphones were extremely rare.

2. This equipment provided amazing capability of coverage as a data-gathering device, producing a large mass of data in a short period of time.

Six or seven human observers would have been needed in each office to equal the coverage capability afforded the researcher by a mere flick of the wrist, switching instantly between two cameras and seven microphones.

3. This medium enabled researchers to repeat observations re-view, re-appraise, re-code, and re-interpret the data by other teams of observers, providing norms for checking the reliability of data.

4. Finally, it was possible to preserve video-tapes for potential future use as authentic source material in education of administrators. Re-enactments may be made of interesting incidents on kinescope for wider dissemination and utilization as illustrative materials in graduate classes and in-service programs.

This was the first crude assay into the use of these particular data-gathering devices in research of educational administration. Mistakes were made, but much was learned. Hopefully the quality of picture and sound will be improved as further developments are made in miniature video equipment and as the technicians gain more experience. For the purposes of this study, the medium proved to be highly objective, efficient, productive, and economical; possessing great coverage capability as a data-gathering technique.

Summary of Findings

The summary of findings is made primarily in terms of the data based on frequencies weighted by the enrollment factor. Raw frequency data are disregarded because the schools of various sizes could not be equated in such comparisons. Internal per cent distribution data had to be used judiciously for two reasons: (1) finer distinctions failed to show up because the one-tenth per cent unit of measurement was too gross, affording only about one-sixth of the precision possible with the weighted frequency data; and (2) the per cent distribution of problems and initiators within each school could not give an adequate description of the entire situation, since significant differences in total numbers of problems existed between the four schools. Therefore, the findings are reported in terms of the hypotheses regarding number, types, and initiators of problems, using primarily the enrollment-weighted frequency data.

Number of Problems:

1. "High" socioeconomic setting was positively associated with the number of problems brought to the school offices. (Table I)
2. "Open" organizational climate was positively associated with the number of problems brought to the school offices. (Table II)
3. Organizational climate, rather than socioeconomic setting, was more closely related to the number of problems brought to the school offices. (Tables I and II)

Types of Problems:

1. "High" socioeconomic setting showed a strong positive association with the following types of problems (Table VI):
    a. Physical Plant Facilities
    b. School-Community Relations
    c. Co-Curricular Activities

   d. Academic Achievement
   e. Pupil Property Accounting
   f. Administrative Organization

2. "Low" socioeconomic setting showed a strong positive association to those types of problems primarily oriented to pupil behavior (Table VI):

   a. Pupil Classroom Disturbance
   b. Misbehavior-School Building and Grounds
   c. Administrative Emergencies
   d. Pupil Transfers and Enrollment
   e. Pupil Neighborhood Disturbance
   f. Pupil Whereabouts Accounting

3. "Open" organizational climate was positively associated with a wide variety in types of problems (Table VII):

   a. Pupil Welfare Problems
   b. Co-Curricular Activities
   c. Pupil Accidents and Emergency Sickness
   d. Administrative Organization
   e. Administrative Emergencies
   f. School-Community Relations
   g. Pupil Whereabouts Accounting
   h. Pupil Property Accounting
   i. In-Service, Professional Growth
   j. Pupil Health Problems
   k. Auxiliary Service Problems
   l. Personnel Problems

4. "Closed" organizational climate was positively associated with a narrow range in types of pupil-behavior-oriented problems (Table VII):

   a. Pupil Classroom Disturbance
   b. Misbehavior-School Building and Grounds

5. Greater differences were shown between problems in constrasting socioeconomic settings, whereas, more types of problems showed significant differences in contrasting organizational climates (Tables VI and VII).

Types of Initiators:

1. "High" socioeconomic setting was positively associated with a wide variety in types of initiators (Table XVII):

   a. Custodial and Maintenance Personnel
   b. Parents
   c. Principal

   d. Citizens
   e. Assistant Principal
   f. Visiting Teacher
   g. Central Administrative Personnel
   h. Other School Service Personnel

2. "Low" socioeconomic setting was positively associated with types of initiators providing primarily corrective and regulatory services (Table XVII):

   a. Attendance Agent
   b. Nurse and Health Department Personnel
   c. Police

3. "Open" organizational climate was positively associated with a wide variety of types of initiators (Table XVIII):

   a. Principal
   b. Parents
   c. Visiting Teacher
   d. Assistant Principal
   e. Police
   f. Custodial and Maintenance Personnel
   g. Attendance Agent
   h. District Administrative Personnel

4. "Closed" organizational climate was positively associated with one type of initiator (Table XVIII):

   Secretaries

5. More types of initiators showed significant differences in contrasting socioeconomic settings, than in contrasting organizational climates (Tables XVII and XVIII).

General Findings:

1. There appeared to be a close similarity between the effects of "high" socioeconomic settings and "open" organizational climate on the number, types, and initiators of problems brought to school offices. (Tables I, II, VI, VII, XVII, and XVIII)

2. There appeared to be a close similarity between the effects of "low" socioeconomic setting and "closed" organizational climate on the number and tyes of problems brought to school offices. Similarity in initiators seemed to be very pronounced when viewed in terms of internal per cent distribution in "low" and "closed" schools. (Tables I, II, VI, VII, XV, and XVI)

3. Though both "low" setting and "closed" climate appeared to re-

strain certain types of persons from initiating problems in the school offices, a "closed" climate showed a more inhibiting effect than a "low" setting on the Principal, Parents, and Visiting Teacher. (Tables XVII and XVIII)

4. Whereas, Assistant Principals were the most frequent initiators of problems in "high" setting schools, Pupils were the most frequent initiators of problems in the "low" setting schools. (Table XV)

5. Whereas, Principals were the most frequent initiators of problems in "open" climate schools, Pupils were the most frequent initiators of problems in the "closed" climate schools. (Table XVI)

6. Whereas, Principals in "high" setting schools seemed to have opportunity to exercise choice in the types of problems initiated in the school offices, Principals in the "low" setting schools were placed more on the receiving than initiating end of action by a steady barrage of time-consuming pupil behavior problems. (Tables VI, VII, XV, and XVI)

7. Whereas, a "closed" climate in a "low" setting school showed a heavy compounding effect on certain types of problems, an "open" climate seemed to off-set some of the effects related to "low" settings - - Pupil Classroom Disturbance and Misbehavior Around School Building and Grounds. (Tables XXVI and XXVII)

8. Whereas, an "open" climate in a "high" setting school showed a heavy compounding effect on certain types of problems, a "closed" climate seemed to off-set some of the effects related to "high" settings - - School-Community Relations, Co-Curricular Activities, and Pupil Property Accounting. (Tables XXVI and XXVII)

9. Whereas, a "closed" climate showed an inhibiting effect, an "open" climate showed an encouraging effect on the number, types, and initiators of problems. (Tables II, VI, VII, XVII, XVIII, XXIX, and XXX)

Conclusions

The most striking difference between schools in the "high" and "low" socioeconomic settings, although not shown in the records, was the "quality" of the impact upon principals made by the pupil-behavior problems brought to the office. Urgency, crisis, and harrassment characterized the challenges confronting principals in "low" setting schools, whereas, businesslike routine operations were the nature of the challenges presented to principals in "high" area schools. The most serious results were that much of the principals' freedom to initiate action was usurped from them by these challenges in the "low" socioeconomic settings, whereas, principals in the "high" area schools retained more control over choice of activities to be initiated.

Differences in "open" or "closed" climates modified some of these results with compounding or off-setting influences. The effects on pupil-behavior problems in the large "low-closed" school compounded in pyramid fashion, creating an almost untenable situation.

The evidence suggests an antecedent association of the "low" socioeconomic setting with pupil-behavior problems. However, any speculation about a possible cause and effect association in the relationship shown between a "closed" climate and pupil-behavior problems raises the question of whether the climate affected the problems, or the problems affected the climate. A cyclical effect of the pupil-problem bombardment on the staff, rather than the administrative behavior of the principal, may have accounted for the teachers' perception of the climate as "closed." This suspicion is strengthened by recalling that the field executives and the other authorities who were consulted had considered the principal of the "low-closed" school to be highly professional - - an innovator in administrative style - - most likely to maintain an "open" climate school.

On the other hand, earlier research has shown that perceptions of a given administrator by subordinates and superiors may be quite contradictory. Perhaps elements in the administrative behavior of the leader may negate his intentions and efforts. The nature of this interaction with the school staff personnel may contribute to a "closed" climate. Halpin and Croft admitted the complexity of factors affecting organizational climate, but claimed to have tapped precisely and primarily this domain in the OCDQ - - the leader-group relationships. The sole instrument used to measure climate in this study was the OCDQ.

Regardless of the possible cause and effect implications of a "closed" climate upon pupil-behavior problems, one fact is clear - - principals must be able to get "on top" of the problems before effective efforts to open the climate can be made. Differences in the impact on principals are listed, described, and discussed in the conclusions which follow.

1. The "press" on principals in "low" setting schools was primarily from the inside, in terms of time-consuming pupil behavior problems.

Where the school setting was "low" and coupled with a "closed" climate, the compounded aggravation of pupil-behavior problems was so great that the principal and assistant principals were virtually inundated by them. They were kept so busy treating symptoms that there was little time left to get at the basic causes. This was evidenced by the great activity and utilization of personnel offering corrective and regulatory services, such as, the attendance agent, nurse and the police.

2. The offices of "low" setting schools were much busier places even though the data show significantly less problems in the "low" versus the "high" setting schools.

Researchers viewing the 450 hours of videotape saw vivid portrayals of differences in the amount of human traffic in the offices of schools in the contrasting settings. Offices of the "high" setting schools had a calm and unhurried atmosphere, while those in the "low" settings were dynamic centers for the enactment of an unending series of critical events.

Much of the interaction with parents and citizens of "high" setting schools was carried on over the telephone, whereas, more people brought their problems "in person" to the offices of "low" setting schools. Problems coming into the offices over the telephone of "high" setting schools were automatically placed into a one-at-a-time sequence by the "busy" signal of the telephone line, whereas, administrators in the "low" setting schools were inescapably confronted face-to-face by multiple problems simultaneously. (Mostly time-consuming pupil-behavior problems). Person-to-person contacts with the required concomitant social amenities were generally more lengthy than easily-terminated telephone conversations. Office personnel in a "high" setting school had more opportunity to discuss a variety of problems with each other and with parents and citizens over the telephone in the equivalent time taken by one serious pupil-behavior problem in a "low" setting school.

The reader is reminded that a "problem" was defined, for this study, as a verbal interaction between two or more people on a school related topic, exclusive of its seriousness, positive-negative valence, or time-consuming nature. Hence, the "busy-ness" of the offices is not adequately portrayed by the data on the number of problems. The number of problems reflects more accurately the frequency with which a variety of school concerns were discussed, however briefly. Variation in the amount of interaction associated with "open" and "closed" climates did not alter this essential difference between "high" and "low" setting schools.

3. A major obstruction to the exercise of leadership in the "low-closed" school was the usurpation by pupils of the principal's opportunity to express choice in matters to be initiated.

The opportunities of the principal to involve staff and community in decision-making in a relaxed and reasonable atmosphere was seriously limited by the number of time-consuming pupil-behavior problems. Thus, the chance to develop improvements in the amount and quality of principal-staff interaction was severely curtailed. A "vicious" and deteriorating cycle of development was operative when the administrators were harrassed and beleaguered by being on the receiving, rather than initiating end of action.

However, in the "low-open" school an off-setting influence was apparent which was seen in significantly smaller frequencies of pupil-behavior problems. Part of the explanation may lie in the fact that this school was approximately half the size of the "low-closed" school.

4. A positive association between the per capita rate of pupil-behavior problems and the size of the enrollment seemed to be in evidence.

The number of pupil-behavior problems in the "low-closed" school exceeded the direct proportions implied by the enrollment weighting factor - - the rate per capita was greater than in the "low-open" school. The effects of large concentrations of children in "low" setting schools may need to be evaluated in terms of the climate they create for the school organization and for pupil adjustment.

With less pupil-problems confronting him, the principal in the "low-open" school was free to initiate more varied activities than was possible in the "low-closed" school. He was able to devote time to drawing parents into involvement in school affairs, and encouraging livelier interaction patterns with staff, outside agencies, auxiliary services, and the community. Meanwhile, the principal and staff of the "low-closed" school were virtually immobilized, insofar as other activities were concerned, by the flood of pupil-behavior problems. Any attempts at initiation of new ideas by the principal may have been construed as overburdening the staff under such conditions.

5. The "press" on principals in "high" setting schools was primarily from the outside, in terms of parental expectations.

Parents and citizens took much initiation into their own hands. They involved themselves in school affairs, and showed great concern with the academic achievement of their children. Teaching methods, curriculum, values and attitudes have traditionally been compatible with the middle class standards of such neighborhoods. Consequently, schools in such settings have operated with a minimum of friction and conflict.

However, differences were significant between the "high-open" and "high-closed" schools. The "closed" climate school showed inhibiting effects on the number of problems, and the frequency with which parents and pupils brought problems to the school office. Most of the interaction, even about school-community relations, took place among the internal school personnel: principal, assistant principal, custodian, secretary, and teachers. A significantly greater number of pupil-neighborhood disturbance problems showed up in the "high-closed," than in the "high-open" school. The "closed" school had an unusual arrangement whereby pupil classroom disturbance problems were discouraged from being sent to the office. Such problems were routed to conference teachers. The time gained by this exclusion was applied mainly to concerns about physical plant facilities.

Implications

1. The compounding and off-setting effects of "open" and "closed" climates on the frequency of pupil-behavior problems may have

implications for the control of delinquency and drop-out rates.

There seemed to be a positive association between the amount of pupil-behavior problems in the schools and the amount of delinquency in the school area, reported by the Detroit Police Youth Bureau. If climate does affect the amount of pupil-behavior problems, as the data show, the certain prospect that more and more youth of the nation will be educated in the urban megalopolis, presents an urgent mandate for substantial school system improvements in large cities.

The Federal Government is now intending to make substantial funds available to improve the impact and effectiveness of education, particularly in the large cities. "Compensatory" materials and personnel have been supplied experimentally by the Great Cities School Improvement Project to many disadvantaged area schools. Greater efforts in that direction will be forthcoming through the Economic Opportunities Act and the Elementary and Secondary Education Act of 1965 with their provisions for Total Action Against Poverty. The focus has been on equalizing the educational opportunities of youth growing up in contrasting socioeconomic settings. The hope is to affect change and improvement in educational practices, procedures, and results. However, if the findings of this study have any predictive value, the implications are that:

2. Efforts for "compensatory education" may be significantly minimized or maximized by the kind of organizational climate existent in the schools.

The statistical evidence of this study indicated that "closed" climates were closely associated with restricting and inhibiting effects on the initiation of problems and participation in general. "Open" climates appeared to encourage initiation and participation in both settings. Implications which logically follow are that:

3. "Closed" climates tend to increase resistance and retardation of change and adaptability, whereas, "open" climates tend to facilitate and accelerate change and adaptability.

The question was raised by earlier researchers whether a special kind of leadership is needed in disadvantaged areas. The results of this study seem to indicate that:

4. Leadership capable of creating an "open" climate, necessary in affecting change and innovation, is needed in all schools in all areas. However, the need for such leadership is critically more urgent in "low" settings and changing neighborhoods.

Periodic crises develop when schools are not sensitively geared to the needs of the communities they serve.

5. If "closed" climates must be temporarily tolerated, they can best be tolerated in "high" socioeconomic settings which are not imminently threatened by a changing neighborhood.

Such situations are becoming increasingly rare in the large cities, and are definitely limited in duration.

6. Until more personnel with such leadership capabilities can be developed, principals with major strengths in guidance and counseling should be assigned to "low" setting schools; those with major strengths in public relations, to "high" setting schools; and those with a combination of both strengths, to schools in changing neighborhoods.

Neither one of the "high" setting schools was confronted with the problems of undergoing a changing neighborhood. However, the implications to be drawn from this study are that:

7. The "press" on principals in schools of changing neighborhoods will be increased from both inside and outside.

Whereas, the pressure on principals in "high" setting schools was primarily from the outside, results of this study indicate that an influx of new pupils from lower socioeconomic settings will increase the pressure from the inside. It is realistic to anticipate that as pressure from increased pupil-behavior problems on the inside grows, reactionary pressure from parents on the outside will also increase.

The "in-migrants" in changing neighborhoods are generally from lower socioeconomic areas. Occasionally, where the change is racial in character, the income, occupation, and cultural levels of the new clientele may be superior to those who leave the neighborhood. However, the more general trend is in the opposite direction. The new-comers bring with them their own particular mores and values. Incongruence of habits and customs in child-rearing practices between the new-comers and old residents presents potential conflict situations.

Schools provide the common ground where people with such divergent behaviors confront each other. The adaptability of the school is really tested in such situations.

8. Establishing and maintaining a "dynamic equilibrium" in the volatile atmosphere of a changing neighborhood school demands an "open" type climate.

The innovations required in such situations will be more far-reaching than those needed in inner-city areas. Most of the changes found necessary in "low" setting schools must be incorporated in the changing neighborhood schools also, without sacrificing existing programs already provided for the middle-class pupils. The range of the instructional programs must be extended at both extremes simultaneously. Efforts, insights and understandings of teachers must be expanded. Provision must be made in classrooms for meeting a wider range in educational backgrounds and behavioral patterns of pupils, if integrated urban schools are to be maintained. "Integration," in these cases, becomes an all-encompassing concept, far beyond its usual racial limitations. Divergent customs, values, attitudes, behaviors, as well as races must be assimilated. Differences in motivational levels, aspirations, and socioeconomic as well as educational backgrounds must be harmonized among pupils, teachers, parents, and administrators.

The traditional staffing patterns, allocation formulas, organizational structure, and administrative practices of elementary schools of the past will not be adequate to meet the challenge. The expectations held by teachers, parents, and administrative superiors of the principal's role must be clarified and brought into better congruence in line with the realities of the situation.

Recommendations

1. Large city school systems should have, as a matter of policy, an objective system of supplementing differentially, according to need, the administrative staff of schools without being accused of showing favoritism. Data of this study gives sufficient evidence of these differences in need. Some school systems have found the assignment of the following types of additional personnel advantageous: elementary school guidance counselor, school community agent, police-counselor, supervisor of after-school activities, full-time school nurse, reading consultant, remedial teacher, and resource teacher.
    a. A special task force of such experienced professionals should be established, ready to be deployed on an emergency basis to schools beginning to undergo rapid neighborhood change.

They should be experienced in organizing and adapting the kinds of new programs needed in changing neighborhoods. While the task force is present, the entire school staff should undergo intensive preparation for the changes needed in teaching materials, methods, and attitudes in a concentrated workshop at the school. Once the programs are established on an on-going basis, new personnel could be trained and fitted easily into these "slots" as replacements to release the task force to go on to its next assignment. Such personnel would assist principals in bringing hard-to-reach parents into the functional orbit of the school.

2. Schools in the "low" socioeconomic settings should be planned so that the pupil enrollment is kept small - - possibly within a range of 400 to 600.
3. School boards and superintendents should act decisively to alleviate conditions which hinder principals from exercising the leadership necessary to establish and maintain "open" type climates - - to help them get "on top" of pupil problems. Time should be provided for intensive and continuous in-service work for principals with their staffs. School systems should assume responsibility for vigorous pre-service and in-service education of administrators to develop the kind of leadership needed in establishing and maintaining "open" type climates in schools. The process of "opening-up" school climates should be based on a system-wide approach through the entire administrative hierarchy. Interaction, feedback, and articulation should be developed throughout the entire chain of command.

The onus of responsibility for the organizational climate of the schools could not be placed solely on the principal. His influence could not be clearly isolated. The degree of control by the district and central offices in limiting or permitting autonomy and use of discretion to building principals may be strongly reflected in the school climates. The responsibility for climate may have to be shared by the entire administrative staff.

Future Research

Any replications of this study should incorporate coding of personal contact versus telephone interactions. Similar related studies could be concerned with the determination of positive-negative valences and time-consumption of various types of problems brought to offices with different climates.

An OCDQ should be developed to measure climate between principals and their regional superiors in the large cities. Research is needed to determine whether school systems as a whole, have unique climates. Do such system climates affect the climate of individual schools? Experimental research is needed to determine how given climates can be changed. Finally, how does extended tenure of teachers and administrators in the same positions (same schools) affect their adaptability to change and innovation. What other factors influence flexibility and adaptability?

The findings of this study constitute at least a start in objective identification of some crucial differences in problems of schools and challenges ot the leadership abilities of principals in contrasting socioeconomic settings. It is hoped that these findings will provide added insight and inspiration for boards and superintendents to encourage further investigations in this direction. More research is needed to develop additional ways and instruments for measuring other factors essential in diagnosing the peculiarities of school situations. Such information is needed for planning appropriate changes and innovations to be implemented in order to increase the educational impact of schools.

APPENDIX A

Fig. 8. --Section of the Organizational Climate Description Questionnaire by A. W. Halpin and D. B. Croft

The items in this questionnaire describe typical behaviors or conditions that occur within an elementary school organization. Please indicate to what extent each of these descriptions characterizes your school. Please do not evaluate the items in terms of "good" or "bad" behavior, but read each item carefully and respond in terms of how well the statement describes your school.

Please mark your response clearly. PLEASE BE SURE THAT YOU MARK EVERY ITEM.

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

32. Teachers have too many committee requirements. 1 2 3 4

33. There is considerable laughter when teachers gather informally. 1 2 3 4

34. Teachers ask nonsensical questions in faculty meetings. 1 2 3 4

35. Custodial service is available when needed. 1 2 3 4

36. Routine duties interfere with the job of teaching. 1 2 3 4

37. Teachers prepare administrative reports by themselves. 1 2 3 4

38. Teachers ramble when they talk in faculty meetings. 1 2 3 4

39. Teachers at this school show much school spirit. 1 2 3 4

40. The principal goes out of his way to help teachers. 1 2 3 4

41. The principal helps teachers solve personal problems. 1 2 3 4

42. Teachers at this school stay by themselves. 1 2 3 4

43. The teachers accomplish their work with great vim, vigor, and pleasure. 1 2 3 4

44. The principal sets an example by working hard himself. 1 2 3 4

45. The principal does personal favors for teachers. 1 2 3 4

46. Teachers eat lunch by themselves in their own classrooms. 1 2 3 4

Fig. 9. --Memorandum to District Administrators

SUBJECT: Video Taping of Problems Brought to Elementary School Offices

FROM: William W. Wattenberg, Lynn Nicholas, Helen Virjo

DATE: January 2, 1964

The purpose of the research we are undertaking (with the help of a grant from the U.S. Office of Education and Wayne State University and in cooperation with the Detroit School System) is to investigate the effects and relationships between the organizational climate and the socioeconomic setting of a school upon the number and nature of the problems that come to the principal's office and the types of persons (pupils, parents, staff, etc.) that bring problems to the office.

Our procedure will be as follows: Using the new Organizational Climate Description Questionnaire and the socioeconomic criteria of the School Housing Division of the Detroit Public Schools, investigators will select four elementary schools in Detroit which will be in contrasting socioeconomic settings and which will have contrasting organizational climates. By "contrasting organizational climate" we mean those elementary schools in which the community and staff are greatly involved with the principal in school activities and problems as compared with those schools in which community and staff are less involved with the principal in school activities and problems.

Miniature video-cameras will be installed at the main desks and in the principals' offices of the schools for not more than sixteen days during the month of March. Number, types, and sources (human) of problems coming to the school office will be recorded as data from the video-tapes, and processed statistically for significant differences and relationships.

Cooperating principals will be assured that the tapes are for research purposes only. Showings of the tapes will be limited to the research staff and to each participating principal himself. It will be possible for each principal to view "on the spot" the tapes made daily in his school. Principals will be guaranteed that anything in the tapes which they consider objectionable or as "invasion of privacy" will be erased upon their request before the tapes leave their buildings. Tapes will be kept as confidential data and the identity of all individuals appearing in them will be respected and protected.

This study is primarily concerned with obtaining objective evidence to determine the nature and extent of the work load of principals - - the wide variety of demands made upon their skills and abilities - - in contrasting types of settings in terms of the problems which come to the offices. No attempt will be made to evaluate the way in which problems are solved.

Values of the findings will be in the implications derived for possible differentiation: in role expectation, selection, placement, pre-service and in-service education of principals, and in new patterns of personnel staffing in elementary schools.

Fig. 10. --List of Technical Equipment Used in the Project

4 - Precision Instrument - V3 - Videotape Recorders
4 - Television Cameras
6 - Wireless Microphones and Radio Receivers
4 - Table Microphones
2 - 7-Channel Mixers
2 - Switching Units
4 - Monitors for Television Cameras
2 - Pan and Tilt Mechanisms
2 - Monitors for 3 PI-3V Video Recorders
2 - Audio Play-Back Units for PI-3V Recorders
2 - Remote Operated Zoom Lens
2 - Fixed Lenses
4 - Stands to mount Cameras
2 - Boxes to house Pan and Tilt Cameras
2 - Back Connection Boxes
2 - Complete sets of Cabling for Audio and Video
2 - Bulk Erasers
2 - Spare Parts Kits for Cameras, Recorders and Monitoring Equipment
2 - Sets of Test Equipment
2 - A-Scope Monitors to determine picture level

Fig. 11. --Directions for Coders

1. All occurrences viewed on the tape are to be annotated as completely and descriptively as possible. Use names whenever possible. (Each separate interaction is an occurrence.)

2. Different aspects of a single situation may be fragmented into discrete occurrences. **Example:**
    Pupil comes into office sick - Principal examines child.
    Principal phones parent to come and get child.
    Principal sends note to teacher about sending child home.
    Parent comes to pick up child.

3. Each annotation is to start with the person who initiates the action or interaction.

4. Familiarize yourself with names and faces of all office personnel, the D.A., Custodian, Nurse, Visiting Teacher, Attendance Teacher and as many of the staff as possible.

5. When returning from separate occurrences to an unbroken continuation of a previous one, precede the annotation with the sign: ¢

6. Be sure each case of annotated pupil misbehavior is located as to where it occurred (in the classroom, in the school building or grounds, or in the community) *so it can be coded properly.*

7. Clarify distinctions between the overlapping ones. (Cat. 1-3, Cat. 4-5, Cat. 8-10.)

8. "Problems" are coded in the left margin of the annotation sheets beside the corresponding annotation - - after the viewing has been completed. Coding format: A 3, E 1, M 12, etc.)

9. When pupil misbehavior cannot be located as to where it occurred, use Category 9 "Misbehavior in Sch[illegible] Building and Grounds."

10. Transcribe the coding on to coding sheets as simple frequencies in the proper cells. (111)

Fig. 12. --Suggestions to Coders

1. Do not code personal chit-chat - - unless it pertains to school topics. You may annotate it - - but do not code it.

2. Discussions about pupils or parents, their character, habits, the home environment, siblings, the child's general adjustment (without an apparent immediate problem involved) is coded into the classification most closely related to the gist of the talk. Categories 11, 13, 14, or 15.

3. Distinguish between "Personnel from Other Schools" - Q, and "Other Personnel of the School" - L. (Delivery men, A.V. repair men are coded as L)

4. If a phone call is made to or received from an unknown person (cannot be identified by the conversation) code the person as "X".

5. Annotate names as often as possible. Use the Detroit Public Schools Directory (back pages, 128-42) to identify their school, position, or department. A directory will be available for use at each coding station. It is alright to inquire from office personnel after school about the names - - if you are a camera coder.)

6. When a pupil or pupils are sent to the offices for acts of misbehavior, for transfers, or for any other "pupil-identified" business - - the pupil (not the sending teacher) is coded as the initiator since they are the cause of the problem.

7. However, pupil messengers delivering notes or supplies, to and from the office are ignored in the coding, and the teacher "D" is assumed to be the initiator (sender) or interactor (receiver) and coded as such with "D". This is teacher-office interaction.

8. To indicate unidentified messages and problems code in category #3 by using a small z. Ex. Unidentified note to secretary by pupil messenger = D 3 z

9. Parents or citizens coming to the school office to request help for themselves in getting jobs, references, letters to agencies, or advice are coded into category #16. (School-Community Relations - - helping people - - building good-will.) Only when the request concerns direct help for the pupil does it go into the other categories.

10. "Behavior" or "Citizenship" slips carried by pupils and checked daily by principals or A.P.'s are recorded in category #9 unless it is evident that the slip is for another type of problem.

Fig. 13. --Instructions for Assistant Researchers and Camera Coders

1. Introduce youself to the school Principal and office staff. Fill out, in duplicate, the card of names of staff members with the help of the school secretary. Return one copy to Room 211 in the Education Building for use of coders.

2. From then on - - interrupt the school activities as little as possible. Be unobtrusive.

3. Taping time each day is from 8:15 to 11:45 a.m. and again from 12:15 to 3:45 p.m.

4. Arrive at least 15 minutes before taping time in order to be ready to annotate promptly at 8:15 or 12:15.

5. Participating principals have been assured that tapes are for research purposes only. Showings of the tapes will be limited to the research staff and to each participating principal himself.

6. Principals have been guaranteed that anything in the tapes which they consider objectionable or as "invasion of privacy" will be erased upon their request before the tapes leave the school area.

7. Immediately following the end of the day's taping (at 3:45 p.m.) go into the school office and check if it is alright to remove the tapes to Wayne State University. "Is it alright to take the tapes now?" (Do not suggest the thought of erasure.)

8. Should any erasure be necessary, it is to be done immediately. Principals have been advised to note the time of any undesirable incident. In such cases - - refer to your annotations for the proper tape - - and instruct the technician to erase the incident. Erasures will be rare (we hope)! The principal may witness the erasure.

9. While annotating incidents during the taping, please jot down clock time in the right edge of paper, periodically, by the annotations. (Suggest every 15 minutes).

10. In order to pick up clear conversations - - long enough to identify the problem thoroughly - - call out the number of the mike to which you want to listen, when necessary. Technicians will tone down the volume of the other mikes. Try to pick up all problems in turn.

Fig. 14. --Explanations of Problem Classifications

(1) Administrative Organizational Problems

Scheduling, reorganization, teacher duties, supplies, requisitions, reports, payroll, financial accounting, mail, deliveries, pickups, safety organization, fire and air raid drills, and others.

(2) Personnel Problems

Teacher transfers, substitute service, student teacher assignments, sick leave and pay, leave of absence, insuran e, retirement, certification, evaluations, parking, promotions, longivity, seniority, lay help, crossing guard mothers, lunchtime aides, clerical and maintenance personnel problems, and others.

(3) Administrative Emergencies

Emergency safety, city services, lunchtime emergencies, messages to and from office, temporary re-scheduling, miscellaneous hazards and emergencies, unidentified problems, and others.

(4) Pupil Transfers and Enrollment

Transfers, enrollment, birth certificates, entry from institutions, special education class enrollment, messages and conferences re above.

(5) Pupil Whereabouts Accounting

Tardiness, absence, truancy, missing pupils, suspensions, expulsions, police and juvenile detentions, apprehensions, investigations of address, guardians, parents, tuitions, and others - - messages and conferences about above.

(6) Pupil Property Accounting

Lost and found, ownership disputes, messages and conferences regarding above.

(7, Pupil Accidents and Emergency Sickness

First aid, sick and injured cases, accident reports, exclusions for suspected contagions - - messages about above.

(8) Classroom Disturbance Problems

Miscellaneous offenses occurring in classrooms sent to office - messages and conferences about above.

(9) Misbehavior in School Building and Grounds

Miscellaneous offenses occurring around the school - - messages and conferences about above.

(10) Pupil Neighborhood Disturbances

Miscellaneous offenses occurring in the neighborhood brought to the office - - messages and conferences about above.

(11) Academic Achievement

Marks, failures, homework, special classes, summer school, demotion, promotions, and other - - messages and conferences about above.

(12) Co-Curricular Activities

Festivals, programs, trips, exhibitions, clubs, service groups, instrumental music, special ability classes, contests, student council, and others.

(13) Auxiliary Service Problems

Attendance center services, psychological clinic, speech services, visiting teacher services, general referrals to school system services, and others.

(14) Pupil Health

Nurse services, health drives, immunization, health referrals to various clinics, hearing tests, health records, and other routine health matters.

(15) Pupil Welfare

Indigent pupil services (milk, school supplies, lunches, bus tickets, free health exams, free glasses, clothing, and others).

(16) School-Community Relations

PTA, communications to parents, citizen complaints, cooperation with neighborhood organizations, pressure groups, adult education, charity campaigns, special weeks and drives, elections, hospitality to visitors, and others.

(17) Physical Plant Facilities

Custodial and maintenance services, repairs, heat, sanitation, furniture, equipment, building inspections, piano tuning, community use of building, and others.

(18) In-Service, Professional Growth

Meetings, faculty trips, supervision of instruction, committees, workshops, professional organizations, research projects, educational experiments, innovations, student teachers, orientation, and others.

Fig. 15. --Explanation of Initiator Classifications

(A) Principal
(B) Assistant Principals
(C) Secretaries
    Cooperating students, substitute and volunteer clerical help.
(D) Teachers
    Substitute and student teachers.
(E) Pupils
(F) Parents
    Guardians, neighbors and relatives in charge.
(G) Citizens
(H) Visiting Teacher (assigned to the school)
(I) Attendance Agent (assigned to the school)
(J) Nurse
    Other health department personnel, and health clinic staffs.
(K) Custodial and Maintenance Personnel
(L) Other School Personnel
    Lunchroom aides, vendors, delivery men, lay helpers, audio-visual repairmen, and others.
(M) Supervisors
    From central administration, and from colleges.
(N) District Administration
    Field executives and personnel in the field offices.
(O) Central Administration
    Personnel department, superintendent's office, and other central office personnel
(P) Auxiliary Service Personnel
    Attendance department, speech teacher, psychological clinic personnel, and others.
(Q) Personnel from Other Schools
    Visiting teachers, college students.
(R) Social Welfare Agency Personnel
    Public assistance, A.D.C.
(S) Public Services and Community Agency Personnel
    Fire departments, D.P.W., community groups, councils, courts, and others.
(T) Police
(X) Unknown Persons

Fig. 16. --Section from Annotations of a Tape

SCHOOL NAME: A
CODER'S NAME: X

Tape Number 2153
Date of Taping 3-5-64
Time of Taping 9:55 - 11:30

K 2	Sec. ans. phone - Mrs. Smart sick - absent
C 2	Sec. calls to get sub for Mrs. Smart
E 7	Pup. - A.P. - tooth loose - Mays checks - Not too loose - it hurts
F 13	Sec. - phone - for prin - not in - Mrs. Williamson - new address
B 1	A.P. - sec. - A.P. paid for supplies out of his own pocket - they received payment
B 1	A.P. - go to bank while quiet - A.P. leaves for bank
E 7	Pup. - A.P. - sores on head - when hair washed last? - ringworm?
D 8	A.P. - tchr. (off camera) pup in instrumental class - just left room without permission - (DE)
B 7	A.P. - tchr. - send girl home who had an accident - had Caster Oil
B 7	A.P. - calls - asks for mother Mrs. Starks - sending child home
	Secs. chat about violence to tchrs. in other schools
B 1	A.P. - secs. - about endorcing check - bank business
D 16	Tchr. - A.P. - tickets - exchange
B 16	A.P. calls parent about tickets
E 16	Pup - Sec. - tickets to PTA play
E 1	Pup - A.P. - needs pencil - money 2¢
E 9	Pups - A.P. - boys say they have a knife - Miss Johnson has it
E 7	Sec. - A.P. - pup - sick in classroom
B 17	A.P. - K - emergency cleanup
	A.P. - Sec. - boys attendance good - clothing good (conversation)

Fig. 17. --Section of a Sample Tally Sheet

	1. Administrative Organizational Problems	2. Administrative Personnel Problems	3. Administrative Emergency Problems
A. Principal	||	|	|||
B. Assistant Principal	𝍸 ||||	|	𝍸 𝍸
C. Secretary	𝍸 𝍸 𝍸 ||||	||||	𝍸 𝍸
D. Teacher	𝍸 ||||	||||	𝍸 𝍸 𝍸 𝍸 𝍸
E. Pupil	𝍸		𝍸 𝍸 𝍸 |||
F. Parent			|
G. Citizen		|	
H. Visiting Teacher			|
I. Attendance Teacher			|
J. Nurse			|
K. Custodial & Maintenance Personnel		|	|||
L. Other School Service Personnel	|		|
M. Supervisor			
N. District Administrator			
O. Central Administrator			
P. Auxiliary Services Personnel			
Q. Personnel from Other Schools			
R. Social Welfare Agency Personnel			
S. Public Service & Com. Agency Pers.	|		
T. Police			
X. Unknown		|	𝍸 ||
	46	13	81

Fig. 18. --Section of Additional Clarification of Classifications

1. Type #1 deals with administrative problems which concern the structural setup of the school, decisions about permanent organization, and routine office procedures.

2. Type #2 deals with administrative handlings of personnel on the staff - - their rights, privileges, conflicts, and problems.

3. All pupil misbehavior (discipline) cases are classified into #8, 9, or 10 with respect to where the misbehavior occurred.

4. Since this is significant, please make every effort to determine the location of the act. When the location of the misbehavior cannot be determined - - use type #9.

5. Type #7 deals with accidents and emergency sickness of only pupils. Emergency sickness or accidents involving adult staff personnel goes into type #3.

6. "Special enrollment" is an administrative report (type #1) made during the month of March in order to get State Aid. (It does not go into type #4.)

7. Messages (either phoned or written) to parents, relatives, neighbors, etc. regarding any problems in the various classifications are recorded as additional separate occurrences (fragmentation of the problem into its various aspects) and are recorded in the respective type classifications. Only when messages to the homes and the community do not fall into any other type, but concern the development of good school community relations and general information about school affairs (newsletter, fliers, questionnaires, surveys, notices, etc.), are they to be put into type #16.

APPENDIX B

TABLE XXXI

RANK ORDER OF INTERNAL PER CENT DISTRIBUTION OF PROBLEMS IN TWO SCHOOLS IN A HIGH SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

Open				Closed			
School C				School D			
Rank	Cat.	Types of Problems	Per Cent	Rank	Cat.	Types of Problems	Per Cent
1	(3)	Administrative Emergencies	25.0	1	(1)	Administrative Organization	20.3
2	(1)	Administrative Organization	18.5	2	(16)	School-Community Relations	15.5
3	(16)	School-Community Relations	10.3	3	(3)	Administrative Emergencies	14.2
4	(7)	Pupil Accidents & Emergency Sickness	7.9	4	(17)	Physical Plant Facilities	9.4
5	(2)	Personnel Problems	6.1	5	(11)	Academic Achievement	6.9
6	(18)	In-Service, Professional Growth	4.2	6	(18)	In-Service, Professional Growth	5.3
7	(12)	Co-Curricular Activities	4.1	7	(2)	Personnel Problems	4.7
8	(11)	Academic Achievement	4.0	8	(12)	Co-Curricular Activities	3.5
9	(6)	Pupil Property Accounting	3.3	9	(14)	Pupil Health	3.3
10	(17)	Physical Plant Facilities	3.3	10	(9)	Misbehavior School Bldg. & Grounds	2.5
11	(9)	Misbehavior School Bldg. & Grounds	2.5	11	(13)	Auxiliary Service Problems	2.5
12	(8)	Pupil Classroom Disturbance	2.3	12	(7)	Pupil Accidents & Emergency Sickness	2.3
13	(5)	Pupil Whereabouts Accounting	2.0	13	(6)	Pupil Property Accounting	2.0
14	(13)	Auxiliary Service Problems	1.8	14	(4)	Pupil Transfers & Enrollment	1.8
15	(14)	Pupil Health	1.8	15	(10)	Pupil Neighborhood Disturbance	1.8
16	(15)	Pupil Welfare	1.5	16	(5)	Pupil Whereabouts Accounting	1.7
17	(4)	Pupil Transfers & Enrollment	0.9	17	(15)	Pupil Welfare	1.3
18	(10)	Pupil Neighborhood Disturbance	0.5	18	(8)	Pupil Classroom Disturbance	1.0
			100.0				100.0

TABLE XXXII

RANK ORDER OF INTERNAL PER CENT DISTRIBUTION OF PROBLEMS IN TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

Open				Closed			
School B				School A			
Rank	Cat.	Types of Problems	Per Cent	Rank	Cat.	Types of Problems	Per Cent
1	(3)	Administrative Emergencies	22.6	1	(3)	Administrative Emergencies	28.5
2	(1)	Administrative Organization	19.8	2	(1)	Administrative Organization	17.3
3	(16)	School-Community Relations	8.1	3	(8)	Pupil Classroom Disturbance	9.6
4	(18)	In-Service, Professional Growth	6.2	4	(9)	Misbehavior School Bldg. & Grounds	6.3
5	(2)	Personnel Problems	5.1	5	(7)	Pupil Accidents & Emergency Sickness	6.3
6	(7)	Pupil Accidents & Emergency Sickness	4.9	6	(2)	Personnel Problems	5.9
7	(14)	Pupil Health	4.9	7	(16)	School-Community Relations	4.8
8	(8)	Pupil Classroom Disturbance	4.1	8	(18)	In-Service, Professional Growth	4.0
9	(5)	Pupil Whereabouts Accounting	4.0	9	(4)	Pupil Transfers and Enrollment	3.1
10	(9)	Misbehavior School Bldg. & Grounds	3.9	10	(11)	Academic Achievement	2.3
11	(15)	Pupil Welfare	3.4	11	(5)	Pupil Whereabouts Accounting	2.2
12	(13)	Auxiliary Service Problems	3.0	12	(14)	Pupil Health	2.2
13	(4)	Pupil Transfers and Enrollment	2.4	13	(10)	Pupil Neighborhood Disturbance	1.9
14	(17)	Physical Plant Facilities	2.0	14	(13)	Auxiliary Service Problems	1.5
15	(10)	Pupil Neighborhood Disturbance	1.7	15	(6)	Pupil Property Accounting	1.3
16	(12)	Co-Curricular Activities	1.6	16	(15)	Pupil Welfare	1.1
17	(11)	Academic Achievement	1.3	17	(17)	Physical Plant Facilities	1.0
18	(6)	Pupil Property Accounting	1.0	18	(12)	Co-Curricular Activities	0.7
			100.0				100.0

TABLE XXXIII

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR PROBLEMS IN TWO SCHOOLS WITH OPEN ORGANIZATIONAL CLIMATES: ONE IN A HIGH AND ONE IN A LOW SOCIOECONOMIC SETTING

Types of Problems	High School C	Low School B	High Frequencies Obs.	High Frequencies Exp.[b]	Low Frequencies Obs.	Low Frequencies Exp.	χ^{2a}	Level of Significance
Problems of Frequent Incidence in a High Setting								
(6) Pupil Property Accounting	+	-	100	73	26	53	23.74	.001
(7) Pupil Accidents & Emergency Sickness	+	-	236	212	130	154	6.46	.02
(11) Academic Achievement Problems	+	-	118	89	35	64	22.59	.001
(12) Co-Curricular Activities	+	-	122	95	42	69	18.24	.001
Problems of Frequent Incidence in a Low Setting								
(1) Administrative Organization	-	+	552	625	526	453	20.29	.001
(4) Pupil Transfers and Enrollment	-	+	28	53	64	39	27.82	.001
(5) Pupil Whereabouts Accounting	-	+	59	96	106	69	34.10	.001
(8) Pupil Classroom Disturbance	-	+	70	104	110	76	26.33	.001
(9) Misbehavior School Bldg. & Grounds	-	+	76	104	104	76	17.88	.001
(13) Auxiliary Service Problems	-	+	53	78	81	56	19.17	.001
(14) Pupil Health Problems	-	+	54	107	131	78	62.26	.001
(15) Pupil Welfare Problems	-	+	44	78	91	57	35.10	.001
(18) In-Service, Professional Growth	-	+	124	168	165	121	27.52	.001

[a] Enrollment factor weighting: High 58%; Low 42%

Degrees of Freedom 1

[b] See footnote Table I

TABLE XXXIV

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF PROBLEMS IN TWO SCHOOLS WITH OPEN ORGANIZATIONAL CLIMATES: ONE IN A HIGH AND ONE IN A LOW SOCIOECONOMIC SETTING

	Types of Problems	High School C	Low School B	Per Cent		χ^{2a}	Level of Significance
				High	Low		
	Problems of Frequent Incidence in a High Setting						
(6)	Pupil Property Accounting	+	-	3.3	1.0	13.01	.001
(7)	Pupil Accidents & Emergency Sickness	+	-	7.9	4.9	7.13	.01
(11)	Academic Achievement Problems	+	-	4.0	1.3	13.21	.001
(12)	Co-Curricular Activities	+	-	4.1	1.6	11.11	.001
	Problems of Frequent Incidence in a Low Setting						
(4)	Pupil Transfers and Enrollment	-	+	0.9	2.4	6.44	.02
(5)	Pupil Whereabouts Accounting	-	+	2.0	4.0	6.76	.01
(8)	Pupil Classroom Disturbance	-	+	2.3	4.1	4.94	.05
(10)	Pupil Neighborhood Disturbance	-	+	0.5	1.7	6.44	.02
(14)	Pupil Health Problems	-	+	1.8	4.9	14.40	.001
(15)	Pupil Welfare Problems	-	+	1.5	3.4	7.73	.01
(18)	In-Service, Professional Growth	-	+	4.2	6.2	4.04	.05

[a] See footnote Table VIII

Degrees of Freedom 1

TABLE XXXV

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR PROBLEMS IN TWO SCHOOLS IN A HIGH SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

Types of Problems	Open School C	Closed School D	Open Frequencies Obs.	Open Frequencies Exp.[b]	Closed Frequencies Obs.	Closed Frequencies Exp.	χ^{2}[a]	Level of Significance
Problems of Frequent Incidence in an Open Climate								
(3) Administrative Emergencies	+	-	748	653	305	400	36.38	.001
(7) Pupil Accidents & Emergency Sickness	+	-	236	177	49	108	51.90	.001
(8) Pupil Classroom Disturbance	+	-	70	56	21	35	9.10	.01
Problems of Frequent Incidence in a Closed Climate								
(1) Administrative Organization	-	+	552	613	436	375	15.99	.001
(4) Pupil Transfers and Enrollment	-	+	28	41	38	25	10.88	.001
(10) Pupil Neighborhood Disturbance	-	+	15	33	38	20	26.02	.001
(11) Academic Achievement	-	+	118	165	148	101	35.26	.001
(13) Auxiliary Service Problems	-	+	53	66	53	40	6.79	.01
(14) Pupil Health Problems	-	+	54	78	71	47	19.64	.001
(16) School Community Relations	-	+	307	397	333	243	53.73	.001
(17) Physical Plant Facilities	-	+	98	185	201	114	107.30	.001
(18) In-Service, Professional Growth	-	+	124	147	113	90	9.48	.01

[a] Enrollment factor weighting: Open 62%; Closed 38%

Degrees of Freedom 1

[b] See footnote Table I.

TABLE XXXVI

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF PROBLEMS IN TWO SCHOOLS IN A HIGH SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

	Types of Problems	Open School C	Closed School D	Per Cent		χ^{2a}	Level of Significance
				Open School C	Closed School D		
	Problems of Frequent Incidence in an Open Climate						
(3)	Administrative Emergencies	+	-	25.0	14.2	29.87	.001
(7)	Pupil Accidents & Emergency Sickness	+	-	7.9	2.3	30.99	.001
(8)	Pupil Classroom Disturbance	+	-	2.3	1.0	5.61	.02
	Problems of Frequent Incidence in a Closed Climate						
(10)	Pupil Neighborhood Disturbance	-	+	0.5	1.8	7.08	.01
(11)	Academic Achievement Problems	-	+	4.0	6.9	8.01	.01
(14)	Pupil Health Problems	-	+	1.8	3.3	4.41	.05
(16)	School Community Problems	-	+	10.3	15.5	10.65	.01
(17)	Physical Plant Facilities	-	+	3.3	9.4	29.31	.001

[a] See footnote Table VIII

Degrees of Freedom 1

TABLE XXXVII

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR PROBLEMS IN TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES: ONE IN A HIGH AND ONE IN A LOW SOCIOECONOMIC SETTING

	Types of Problems	High School D	Low School A	High Frequencies		Low Frequencies		χ^{2}[a]	Level of Significance
				Obs.	Exp.[b]	Obs.	Exp.		
	Problems of Frequent Incidence in a High Setting								
(1)	Administrative Organization	+	-	436	293	738	881	93.00	.001
(6)	Pupil Property Accounting	+	-	44	25	55	74	19.32	.001
(11)	Academic Achievement Problems	+	-	148	61	97	184	165.22	.001
(12)	Co-Curricular Activities	+	-	75	26	30	79	122.74	.001
(13)	Auxiliary Service Problems	+	-	53	30	66	89	23.57	.001
(14)	Pupil Health Problems	+	-	71	42	96	125	26.75	.001
(15)	Pupil Welfare Problems	+	-	27	18	47	56	5.95	.02
(16)	School-Community Relations	+	-	333	134	204	403	393.80	.001
(17)	Physical Plant Facilities	+	-	201	61	43	183	428.41	.001
(18)	In-Service, Professional Growth	+	-	113	71	172	214	33.09	.001
	Problems of Frequent Incidence in a Low Setting								
(3)	Administrative Emergencies	-	+	305	380	1216	1141	19.73	.001
(7)	Pupil Accidents & Emergency Sickness	-	+	49	79	269	239	15.16	.001
(8)	Pupil Classroom Disturbance	-	+	21	107	408	322	92.09	.001
(9)	Misbehavior School Bldg. & Grounds	-	+	54	81	268	241	12.13	.001

[a] Enrollment factor weighting: High 25%; Low 75%

Degrees of Freedom 1

[b] See footnote Table I

TABLE XXXVIII

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF PROBLEMS IN TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES: ONE IN A HIGH AND ONE IN A LOW SOCIOECONOMIC SETTING

Types of Problems	High School D	Low School A	Per Cent		χ^2[a]	Level of Significance
			High	Low		
Problems of Frequent Incidence in a High Setting						
(11) Academic Achievement Problems	+	-	6.9	2.3	23.34	.001
(12) Co-Curricular Activities	+	-	3.5	0.7	18.60	.001
(16) School-Community Relations	+	-	15.5	4.8	56.88	.001
(17) Physical Plant Facilities	+	-	9.4	1.0	67.40	.001
Problems of Frequent Incidence in a Low Setting						
(3) Administrative Emergencies	-	+	14.2	28.5	47.64	.001
(7) Pupil Accidents & Emergency Sickness	-	+	2.3	6.3	18.80	.001
(8) Pupil Classroom Disturbance	-	+	1.0	9.6	69.84	.001
(9) Misbehavior School Bldg. & Grounds	-	+	2.5	6.3	16.08	.001

[a] See footnote Table VIII

Degrees of Freedom 1

TABLE XXXIX

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR PROBLEMS IN TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

	Types of Problems	Open School B	Closed School A	Open Frequencies		Closed Frequencies		χ^{2}[a]	Level of Significance
				Obs.	Exp.[b]	Obs.	Exp.		
	Problems of Frequent Incidence in the Open Climate								
(1)	Administrative Organization	+	-	526	367	738	897	97.07	.001
(2)	Personnel Problems	+	-	135	112	252	275	6.64	.01
(3)	Administrative Emergencies	+	-	601	527	1216	1290	14.63	.001
(5)	Pupil Whereabouts Accounting	+	-	106	59	96	143	52.89	.001
(12)	Co-Curricular Activities	+	-	42	21	30	51	29.65	.001
(13)	Auxiliary Service Problems	+	-	81	43	66	104	47.46	.001
(14)	Pupil Health Problems	+	-	131	66	96	161	90.26	.001
(15)	Pupil Welfare Problems	+	-	91	40	47	98	91.56	.001
(16)	School Community Relations	+	-	217	122	204	299	104.16	.001
(17)	Physical Plant Facilities	+	-	53	28	43	68	31.51	.001
(18)	In-Service, Professional Growth	+	-	165	98	172	239	64.59	.001
	Problems of Frequent Incidence in the Closed Climate								
(8)	Pupil Classroom Disturbance	-	+	110	150	408	368	15.02	.001

[a] Enrollment factor weighting: Open 29%; Closed 71%

Degrees of Freedom 1

[b] See footnote Table I

TABLE XL

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF PROBLEMS IN TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

	Types of Problems	Open School B	Closed School A	Per Cent		χ^{2}[a]	Level of Significance
				Open	Closed		
	Problems of Frequent Incidence in an Open Climate						
(5)	Pupil Whereabouts Accounting	+	-	4.0	2.2	4.82	.05
(13)	Auxiliary Service Problems	+	-	3.0	1.5	4.88	.05
(14)	Pupil Health Problems	+	-	4.9	2.2	9.97	.01
(15)	Pupil Welfare Problems	+	-	3.4	1.1	11.89	.001
(16)	School Community Relations	+	-	8.1	4.8	8.80	.01
(18)	In-Service, Professional Growth	+	-	6.2	4.0	4.49	.05
	Problems of Frequent Incidence in a Closed Climate						
(3)	Administrative Emergencies	-	+	22.6	28.5	6.83	.01
(8)	Pupil Classroom Disturbance	-	+	4.1	9.6	21.50	.001
(9)	Misbehavior School Bldg. & Grounds	-	+	3.9	6.3	5.52	.02

[a] See footnote Table VIII

Degrees of Freedom 1

TABLE XLI

RANK ORDER OF INTERNAL PER CENT DISTRIBUTION OF INITIATORS IN TWO SCHOOLS IN A HIGH SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

Open				Closed			
School C				School D			
Rank	Cat.	Types of Initiators	Per Cent	Rank	Cat.	Types of Initiators	Per Cent
1	(B)	Assistant Principal	20.3	1	(A)	Principal	21.5
2	(E)	Pupils	19.5	2	(D)	Teachers	18.8
3	(D)	Teachers	16.0	3	(B)	Assistant Principal	17.5
4	(A)	Principal	14.0	4	(C)	Secretaries	12.9
5	(C)	Secretaries	10.1	5	(E)	Pupils	11.7
6	(F)	Parents	9.6	6	(K)	Custodial and Maintenance Pers.	5.8
7	(K)	Custodial & Maintenance Personnel	3.1	7	(F)	Parents	5.0
8	(X)	Unknown	2.0	8	(X)	Unknown	1.3
9	(H)	Visiting Teacher	1.5	9	(L)	Other School Service Personnel	0.8
10	(Q)	Personnel from Other Schools	1.1	10	(O)	Central Administration Personnel	0.8
11	(G)	Citizens	0.7	11	(S)	Public Services & Com. Agency Pers.	0.8
12	(L)	Other School Service Personnel	0.6	12	(Q)	Personnel from Other Schools	0.8
13	(O)	Central Administration Personnel	0.4	13	(G)	Citizens	0.7
14	(S)	Public Services & Com. Agency Pers.	0.4	14	(J)	Nurse & Health Dept. Personnel	0.4
15	(P)	Auxiliary Service Personnel	0.3	15	(H)	Visiting Teacher	0.3
16	(R)	Social Welfare Agency Personnel	0.2	16	(M)	Supervisors	0.3
17	(I)	Attendance Agent	0.1	17	(P)	Auxiliary Service Personnel	0.3
18	(J)	Nurse & Health Dept. Personnel	0.1	18	(N)	District Administration Personnel	0.2
19	(M)	Supervisors	0.0	19	(T)	Police	0.1
20	(N)	District Administration Personnel	0.0	20	(I)	Attendance Agent	0.0
21	(T)	Police	0.0	21	(R)	Social Welfare Agency Personnel	0.0
			100.0				100.0

TABLE XLII

RANK ORDER OF INTERNAL PER CENT DISTRIBUTION OF INITIATORS IN TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

Open				Closed			
School B				School A			
Rank	Cat.	Types of Initiators	Per Cent	Rank	Cat.	Types of Initiators	Per Cent
1	(A)	Principal	24.0	1	(E)	Pupils	23.8
2	(B)	Assistant	17.0	2	(D)	Teachers	19.5
3	(D)	Teachers	16.6	3	(B)	Assistant Principal	19.1
4	(E)	Pupils	14.4	4	(C)	Secretaries	15.3
5	(C)	Secretaries	8.8	5	(A)	Principal	9.8
6	(F)	Parents	5.3	6	(F)	Parents	5.2
7	(K)	Custodial & Maintenance Personnel	3.1	7	(X)	Unknown	1.6
8	(X)	Unknown	2.5	8	(Q)	Personnel from Other Schools	1.0
9	(I)	Attendance Agent	1.6	9	(K)	Custodial & Maintenance Personnel	0.9
10	(J)	Nurse and Health Dept. Personnel	1.6	10	(P)	Auxiliary Service Personnel	0.8
11	(T)	Police	1.1	11	(I)	Attendance Agent	0.7
12	(Q)	Personnel from Other Schools	1.0	12	(J)	Nurse and Health Dept. Personnel	0.7
13	(S)	Public Services & Com. Agency Pers.	0.9	13	(S)	Public Services & Com. Agency Pers.	0.4
14	(L)	Other School Service Personnel	0.6	14	(L)	Other School Service Personnel	0.3
15	(N)	District Administration Personnel	0.6	15	(O)	Central Administration Personnel	0.3
16	(G)	Citizens	0.3	16	(T)	Police	0.2
17	(P)	Auxiliary Service Personnel	0.3	17	(G)	Citizens	0.1
18	(O)	Central Administration Personnel	0.2	18	(H)	Visiting Teacher	0.1
19	(M)	Supervisors	0.1	19	(N)	District Administration Personnel	0.1
20	(H)	Visiting Teacher	0.0	20	(R)	Social Welfare Agency Personnel	0.1
21	(R)	Social Welfare Agency Personnel	0.0	21	(M)	Supervisors	0.0
			100.0				100.0

TABLE XLIII

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INITIATORS OF PROBLEMS IN TWO SCHOOLS WITH OPEN ORGANIZATIONAL CLIMATES: ONE IN A HIGH AND ONE IN A LOW SOCIOECONOMIC SETTING

Types of Initiators	Open School C	Low School B	High Frequencies		Low Frequencies		χ^{2a}	Level of Significance
			Obs.	Exp.[b]	Obs.	Exp.		
Frequent Initiators in a High Setting								
(F) Parents	+	-	286	248	142	180	13.84	.001
(H) Visiting Teacher	+	-	44	26	1	19	29.51	.001
Frequent Initiators in a Low Setting								
(A) Principal	-	+	419	613	639	445	145.96	.001
(D) Teachers	-	+	476	532	442	386	14.01	.001
(I) Attendance Agent	-	+	3	27	43	19	51.65	.001
(J) Nurse and Health Dept. Personnel	-	+	2	26	42	18	54.15	.001
(N) District Administration Personnel	-	+	0	9	16	7	20.57	.001
(S) Public Services & Com. Agency Pers.	-	+	12	20	23	15	7.47	.01
(T) Police	-	+	1	18	30	13	38.29	.001
(X) Unknown	-	+	59	72	65	52	5.60	.02

[a] Enrollment factor weighting: High 58%; Low 42%

Degrees of Freedom 1

[b] See footnote Table I

TABLE XLIV

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF INITIATORS OF PROBLEMS IN TWO SCHOOLS WITH OPEN ORGANIZATIONAL CLIMATES: ONE IN A HIGH AND ONE IN A LOW SOCIOECONOMIC SETTING

Types of Initiators	High School C	Low School B	Per Cent		χ^{2a}	Level of Significance
			High	Low		
Frequent Initiators in a High Setting						
(E) Pupils	+	-	19.5	14.4	7.69	.01
(F) Parents	+	-	9.6	5.3	12.08	.001
(H) Visiting Teacher	+	-	1.5	0.0	13.66	.001
Frequent Initiators in a Low Setting						
(A) Principal	-	+	14.0	24.0	26.14	.001
(I) Attendance Agent	-	+	0.1	1.6	13.22	.001
(J) Nurse and Health Dept. Personnel	-	+	0.1	1.6	13.22	.001
(T) Police	-	+	0.0	1.1	11.00	.001

[a] See footnote Table VIII

Degrees of Freedom 1

TABLE XLV

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INITIATORS OF PROBLEMS IN TWO SCHOOLS IN A HIGH SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

Types of Initiators	Open School C	Closed School D	Open Frequencies Obs.	Open Frequencies Exp.[b]	Closed Frequencies Obs.	Closed Frequencies Exp.	χ^{2a}	Level of Significance
Frequent Initiators in an Open Climate								
(E) Pupils	+	-	582	516	250	316	48.07	.001
(F) Parents	+	-	286	244	108	150	18.99	.001
(H) Visiting Teacher	+	-	44	32	7	19	12.08	.001
Frequent Initiators in a Closed Climate								
(A) Principal	-	+	419	545	460	334	76.66	.001
(C) Secretaries	-	+	302	358	276	220	22.87	.001
(D) Teachers	-	+	476	544	402	334	22.34	.001
(K) Custodial and Maintenance Personnel	-	+	92	134	124	82	34.67	.001
(O) Central Administration Personnel	-	+	13	19	17	11	5.16	.05
(S) Public Services & Com. Agency Pers.	-	+	12	19	18	11	7.03	.01

[a] Enrollment factor weighting: Open 62%; Closed 38%

Degrees of Freedom 1

[b] See footnote Table I

TABLE XLVI

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF INITIATORS OF PROBLEMS IN TWO SCHOOLS IN A HIGH SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

Types of Initiators	Open School C	Closed School D	Per Cent		χ^{2a}	Level of Significance
			Open	Closed		
Frequent Initiators in an Open Climate						
(E) Pupils	+	-	19.5	11.7	19.71	.001
(F) Parents	+	-	9.6	5.0	14.13	.001
(H) Visiting Teacher	+	-	1.5	0.3	7.31	.01
Frequent Initiators in a Closed Climate						
(A) Principal	-	+	14.0	21.5	15.49	.001
(K) Custodial and Maintenance Personnel	-	+	3.1	5.8	8.22	.01

[a] See footnote Table VIII

Degrees of Freedom 1

TABLE XLVII

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INITIATORS OF PROBLEMS IN TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES: ONE IN A HIGH AND ONE IN A LOW SOCIOECONOMIC SETTING

Types of Initiators	High School D	Low School A	High Frequencies Obs.	High Frequencies Exp.[b]	Low Frequencies Obs.	Low Frequencies Exp.	χ^{2a}	Level of Significance
Frequent Initiators in a High Setting								
(A) Principal	+	-	460	220	418	658	349.36	.001
(B) Assistant Principal	+	-	376	297	814	893	28.00	.001
(C) Secretaries	+	-	276	232	654	698	11.11	.001
(D) Teachers	+	-	402	309	833	926	37.33	.001
(F) Parents	+	-	108	82	220	246	10.99	.001
(G) Citizens	+	-	15	5	6	16	26.25	.001
(K) Custodial and Maintenance Personnel	+	-	124	41	40	123	224.03	.001
(L) Other School Service Personnel	+	-	17	8	14	23	12.78	.001
(O) Central Administration Personnel	+	-	17	7	11	21	19.05	.001
(S) Public Services & Com. Agency Pers.	+	-	18	9	19	28	11.89	.001
Frequent Initiators in a Low Setting								
(E) Pupils	-	+	250	316	1016	950	18.37	.001
(I) Attendance Agent	-	+	1	7	29	23	6.71	.01

[a] Enrollment factor weighting: High 25%; Low 75%

Degrees of Freedom 1

[b] See footnote Table I

TABLE XLVIII

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF INITIATORS OF PROBLEMS IN TWO SCHOOLS WITH CLOSED ORGANIZATIONAL CLIMATES: ONE IN A HIGH AND ONE IN A LOW SOCIOECONOMIC SETTING

Types of Initiators	High School D	Low School A	Per Cent High	Per Cent Low	χ^{2a}	Level of Significance
Frequent Initiators in a High Setting						
(A) Principal	+	-	21.5	9.8	43.48	.001
(K) Custodial and Maintenance Personnel	+	-	5.8	0.9	34.94	.001
Frequent Initiators in a Low Setting						
(E) Pupils	-	+	11.7	23.8	41.60	.001

[a] See footnote Table VIII

Degrees of Freedom 1

TABLE XLIX

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INITIATORS OF PROBLEMS IN TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

Types of Initiators	Open School B	Closed School A	Open Frequencies Obs.	Open Frequencies Exp.[b]	Closed Frequencies Obs.	Closed Frequencies Exp.	χ^2[a]	Level of Significance
Frequent Initiators in an Open Climate								
(A) Principal	+	-	639	307	418	750	506.01	.001
(B) Assistant Principal	+	-	453	367	814	900	28.37	.001
(D) Teachers	+	-	442	370	833	905	19.74	.001
(F) Parents	+	-	142	106	220	256	18.37	.001
(I) Attendance Agent	+	-	43	22	29	50	32.54	.001
(J) Nurse and Health Dept. Personnel	+	-	42	21	29	50	29.82	.001
(K) Custodial and Maintenance Personnel	+	-	82	35	40	87	88.50	.001
(L) Other School Service Personnel	+	-	15	8	14	21	8.46	.01
(N) District Administration Personnel	+	-	16	6	4	14	23.81	.001
(S) Public Services & Com. Agency Personnel	+	-	23	12	19	30	14.11	.001
(T) Police	+	-	30	11	8	27	46.19	.001
(X) Unknown	+	-	65	39	69	94	24.52	.001
Frequent Initiators in a Closed Climate								
None								

[a] Enrollment factor weighting: Open 29%; Closed 71%

Degrees of Freedom 1

[b] See footnote Table I

TABLE L

VALUES OF χ^2 FOUND TO BE SIGNIFICANT FOR INTERNAL PER CENT DISTRIBUTION OF INITIATORS OF PROBLEMS IN TWO SCHOOLS IN A LOW SOCIOECONOMIC SETTING: ONE WITH AN OPEN AND ONE WITH A CLOSED ORGANIZATIONAL CLIMATE

Types of Initiators	Open School B	Closed School A	Per Cent		χ^{2a}	Level of Significance
			Open	Closed		
Frequent Initiators in an Open Climate						
(A) Principal	+	-	24.0	9.8	59.97	.001
(K) Custodial and Maintenance Personnel	+	-	3.1	0.9	11.45	.001
(T) Police	+	-	1.1	0.2	6.72	.01
Frequent Initiators in a Closed Climate						
(C) Secretaries	-	+	8.8	15.3	17.45	.001
(E) Pupils	-	+	14.4	23.8	23.20	.001

[a] See footnote Table VIII

Degrees of Freedom 1

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